29th Congress, [SENATE.] [211]
2d Session.

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1846/49

SMITHSONIAN INSTITUTION.

Annual REPORT

FROM

THE BOARD OF REGENTS,

SUBMITTED TO CONGRESS,

Of the operations, expenditures, and condition of the Smithsonian Institution.

March 3, 1847.
Read, and ordered to be printed.

To the Senate and House of Representatives of the United States:

In obedience to the act of Congress "to establish the Smithsonian Institution for the increase and diffusion of knowledge among men," the Board of Regents submit to Congress a report of the "operations, expenditures, and condition of the institution."

On the day prescribed by the act creating the institution, the Regents' assembled in the city of Washington, and proceeded to the execution of the duties assigned to them. For an account of their organization, and the measures thereafter adopted by the Board of Regents to give effect to the provisions of the act of their creation, and to the intentions of the Testator, they submit the following, (being all the material portions of the journal of their proceedings,) as the best and fullest exposition of their transactions, and of the present condition of the institution.

G. M. DALLAS, *Chancellor.*

Joseph Henry, *Secretary.*

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Journal of proceedings of the regents of the Smithsonian Institution.

At a meeting of the Board of Regents of the Smithsonian Institution, held at the city of Washington, on Monday, the 7th day of September, anno Domini 1846, present—

Hon. George M. Dallas, Vice President of the United States;
Hon. R. B. Taney, Chief Justice;
Hon. Wm. W. Seaton, Mayor of the city of Washington;
Hon. George Evans, Senator;
Hon. Isaac S. Pennybacker, Senator;
Hon. Robert Dale Owen, Representative;
Hon. Wm. J. Hough, Representative;
Hon. Henry W. Hilliard, Representative;
Hon. Rufus Choate, of Mass., Citizen at large;
Gideon Hawley, LLD., of New York, Citizen at large;
Hon. Richard Rush, of Penn., Citizen at large;
Alexander Dallas Bache, LLD., National Institute;
Col. Joseph G. Totten, National Institute.

For the purpose of a preliminary organization of said board, Hon. George M. Dallas was appointed President, and Hon. Wm. J. Hough Secretary.

On motion, it was

Resolved, That the President appoint a suitable person doorkeeper, who shall also act as messenger of said board during the present session.

Whereupon, the President appointed William McPeak doorkeeper and messenger.

On motion, it was

Resolved, That the Rules and Orders of the Senate of the United States be adopted as the Rules and Orders for the government of this board, until others shall be adopted in their stead.

On motion, it was

Resolved, That the Secretary of this institution, hereafter to be elected, procure from the Department of State a copy of the joint resolution of the two houses of Congress by which a portion of the regents of this institution were appointed; and that he also procure from the Secretary of the Senate and from the Clerk of the House of Representatives, respectively, a certificate of the appointment of the regents from their respective houses, and file the same in the office of the Secretary of said institution.

On motion, it was

Resolved, That all further action of this board in relation to the election of officers be postponed until to-morrow.

On motion, the board adjourned to to-morrow.

TUESDAY, September 8, 1846.

The Board of Regents met pursuant to adjournment.

Present, the same regents named in yesterday's proceedings, except Mr. Totten, who is absent in consequence of sickness.

On motion, the board then proceeded to the election of a Chancellor, by ballot; and, upon counting the ballots, it appeared that Hon. George M. Dallas was unanimously elected.

On motion, the board then proceeded to elect a member thereof Secretary of said Board of Regents and of the Smithsonian Institution; and, upon counting the ballots, it appeared that William J. Hough was elected.

On motion, it was

Resolved, That the Secretary do now prepare six ballots, on two of which the word "two" shall be written, on two others the word "four," and on the remaining two the word "six;" and that each of the regents appointed by joint resolution of Congress of the 10th August, 1846, draw one of said ballots; and the regents who draw the ballots with the word "two" thefeon shall hold their offices of regents for the term of two years; the regents who draw the ballots with the word "four" thereon shall hold their offices for the term of four years; and the regents who draw the ballots with the word "six" thereon shall hold their offices for the term of six years, in conformity with the act to establish the "Smithsonian Institution for the increase and diffusion of knowledge among men," approved August 10, 1846.

On motion, it was

Resolved, That the Chancellor draw the ballot for any regent who is not present.

The ballots were prepared and drawn, as provided in the foregoing resolutions, and resulted as follows:

Mr. Choate drew for two years;
Mr. Hawley drew for two years;
Mr. Rush drew for four years;
Mr. Totten drew for four years;
Mr. Bache drew for six years;
Mr. Preston drew for six years.

The board then proceeded to the election of an Executive Committee, by ballot; and, upon counting the ballots, it appeared that Mr. Owen, Mr. Seaton, and Mr. Totten were elected.

It was then

Resolved, That William W. Seaton be, and he is hereby, appointed chairman of said Executive Committee.

It was further

Resolved, That the chairman of the Executive Committee be the disbursing officer, for the payment of the expenses of the regents, and other contingent and incidental expenses of the sessions of the board, and be authorized to receive from the proper officer of the Treasury Department whatever sum may be certified by the Chancellor and Secretary to be necessary for that purpose.

On motion, it was

Resolved, That the Secretary be authorized to employ a recording clerk, as an assistant in the discharge of his duties, whose compensation shall be determined by the Executive Committee.

[In compliance with the seventh section of the act of Congress establishing the Smithsonian Institution, and with the foregoing resolution, the Secretary appointed Benjamin B. French, esq., Assistant Secretary and Recording Clerk of the institution.]

On motion, it was

Resolved, That the Secretary be authorized to procure a book, in which the proceedings of the board shall be recorded; and a description of the site selected by the board, set out by metes and bounds, shall be made and signed by the regents present, and shall have also appended the assent of the President, the Secretary of State, the Secretary of the Treasury, the Secretary of War, the Secretary of the Navy, and the Commissioner of the Patent Office, to the same. And the Secretary shall also record in the same the will of James Smithson; the original act of Congress accepting the trust; the law establishing the existing institution; the resolution of Congress appointing regents of the Smithsonian Institution; also, the certificates of the Secretary of the Senate and of the Clerk of the House of Representatives, respectively, as to the regents appointed from their respective houses.

On motion,

Resolved, That a committee of three be appointed by the Chancellor, from the members of the board, to digest a plan to carry out the provisions of the act to establish the Smithsonian Institution, and that they report the same to the next meeting of the board.

Whereupon, the Chancellor appointed Mr. Owen, Mr. Hilliard, and Mr. Bache said committee.

The following preamble and resolution were offered and agreed to:

Whereas the act to establish the Smithsonian Institution prescribes an appropriation, not exceeding an average of twenty-five thousand dollars annually, for the gradual formation of a library, composed of valuable books pertaining to all departments of human knowledge: Therefore,

Resolved, That a committee of three be appointed, to prepare a report upon the subject of the formation of such a library, indicating its general character and the modes of proceeding to accumulate it, and to present such report at the next regular meeting of the board.

Whereupon, the Chancellor appointed Mr. Choate, Mr. Hawley, and Mr. Rush said committee.

Adjourned to 10 o'clock to-morrow.

WEDNESDAY, September 9, 1846.

The board met pursuant to adjournment.

Present, the same regents as yesterday.

Mr. Owen presented to the board, in behalf of David D. Owen, M. D., of Indiana, a plan, drawings, and specifications of a building for said institution.

Mr. Owen also presented a plan and drawings for the same from Mr. Robert Mills, architect, of Washington.

On motion,

Resolved, That the Chancellor and Secretary of the Smithsonian Institution and the Executive Committee of the Board of Regents be, and they are hereby, authorized and instructed to take such measures as may be deemed by them most proper to obtain plans for the erection of buildings, fulfilling all the conditions in reference to them contained in the law organizing this institution, and that said committee report such plan as they may approve to this board, at its next meeting: and further, that said committee specially report in regard to the best material for said buildings, and to the best modes of warming, lighting, and ventilating the same, with estimates of the cost when constructed of different materials; and that they further report in regard to such other matters as they may consider important in the premises.

On motion, it was

Resolved, That the thanks of this board be offered to David Dale Owen, M. D., of Indiana, for the plans of buildings for the Smithsonian Institution, presented on his behalf; and that said plans, with the correspondence explanatory of the same, and any other plans which may be presented to this board, be referred to the committee just named.

On motion, it was

Resolved, That the committee appointed to report at the next session are authorized to purchase such works, per account of the board, on architecture, bibliography, and the like, as they may deem necessary to enable them to perform the duties of their appointment; to visit any structures and collections in this country; and also to avail themselves of the suggestions of other skilful persons, and to offer therefor, if necessary, such remuneration as the regents may choose subsequently to make.

On motion, it was

Resolved, That the regular meetings of the Board of Regents shall be on the second Wednesday of December and the third Wednesday of February in each year; and on the first Wednesday of June in each alternate year, commencing with the first Wednesday of June in the year 1848.

On motion, it was

Resolved, That Mr. Rush be a committee to ascertain, through the solicitors formerly employed by him on behalf of the United States in the suit to obtain the Smithsonian bequest, or otherwise, whether Madam De la Batut still survives; and if not, what steps are necessary to be taken to obtain the fund reverting to the United States at her death; being a portion of the original property of James Smithson retained by the English court of chancery, in order to furnish, in the shape of interest, an annuity to the said Madam De la Batut. And further, in case the said Madam De la Batut survives, to adopt measures by which her decease may be communicated to the board whenever that event may occur. And that Mr. Rush report to the Executive Committee the legal charge thus incurred, which the said committee is hereby authorized to pay.

On motion, it was

Resolved, That the subject of the selection of a site be referred to the committee on the buildings constituted at this meeting, to report at an adjourned meeting of this board.

On motion, it was

Resolved, That when this board adjourn, it adjourn to meet at the Vice President's room, in the Capitol, on the last Monday of November next, at 12 o'clock, noon.

On motion, it was

Resolved, That Mr. Choate and Mr. Pennybacker be added to the committee appointed yesterday to digest a plan to carry out the provisions of the act establishing the Smithsonian Institution.

It was

Resolved, That the Secretary be requested, without unnecessary delay, to collect, on behalf of the institution, all the documents, Congressional and others, connected with the history of the Smithsonian bequest, and of its legislation, and cause them to be substantially bound, as a commencement of its library.

William Archer, architect, of the city of Washington, presented to the board a plan and drawings for a building for the institution, together with specifications and estimates of cost, &c.; which were referred to the Committee on Buildings.

And then the board adjourned until the last Monday in November next.

MONDAY, November 30, 1846.

Agreeably to their adjournment on the 9th day of September last, a meeting of the regents of the Smithsonian Institution was held at the room of the Vice President of the United States, in the Capitol.

George M. Dallas, the Chancellor, (and one of the regents,) and the following regents, appeared, viz: William W. Seaton, Isaac S. Pennybacker, Sidney Breese, Robert Dale Owen, William J. Hough, Henry W. Hilliard, Richard Rush, Gideon Hawley, Alexander Dallas Bache, and Joseph G. Totten.

Messrs. Hough, Seaton, Totten, Rush, and the Chancellor, each presented sundry letters, recommendations, &c., relative to applications for the office of secretary of the institution; which were severally placed upon file for future consideration.

The Chancellor, from the committee appointed at the last session of the Board of Regents "to obtain plans for the erection of buildings," to consider as to materials, the warming and lighting the buildings, &c., made the following report, accompanied by sundry letters from Mr. David Dale Owen and Professors Silliman and Fowler, in relation to the selection of material for the erection of the institution building.

The undersigned, a committee appointed by the board at its session on the 9th of September last, respectfully report:

In order "to obtain plans for the erection of buildings," to form some judgment "in regard to the best material for said buildings," and to ascertain "the best modes of warming, lighting, and ventilating the same," the committee took the following measures.

With a view to give, as extensively and rapidly as possible, notice to the architects of the country of the objects and duties of the committee, the resolution by which they were constituted was published in the newspapers of this city on the 22d day of September, 1846.

The shortness of time, however, rendering it probable that no satisfactory communications would be received from architects before the present meeting of the board, the committee entered upon a tour of personal inspection, hoping to accumulate information that might guide the board in the choice of a plan for building; and Mr. Owen, Mr. Hough, and Col. Totten visited our principal cities, examined many if not all of their most noted structures, had conferences with several of their architects eminent for science and success, collected specimens of the best stone material, and obtained data upon which to "estimate the cost of the contemplated building when constructed of different materials."

At the city of Philadelphia, the Girard College, the Eastern Penitentiary, the House of Refuge, the hall of the Mercantile Library Company, the Exchange, the Custom-house, (formerly the Bank of the United States,) and the Athenæum, now being built, were visited.

Mr. Strickland and Mr. Walter were called upon, but were unfortunately absent from the city. Mr. Haviland was also called upon; but not being seen, all necessary information was sent to him through his son. Mr. Notman was seen and repeatedly conversed with.

At the city of Trenton, the State Lunatic Asylum, and the old but renovated State-house, were visited.

In examining these edifices, advantage was derived from the constant presence and intelligent remarks of Mr. Notman.

At the city of New York, Grace Church, Calvary Church, the Church of the Puritans, the Tombs, Trinity Church, the University, Dr. Potts's Church, the Muhlenburg Church, Mr. Bellows's Church, the Church of the Pilgrims, and several other churches, were visited. Much valuable information was obtained at consultations with Mr. Renwick, accompanied by his father, Professor Renwick; Mr. Upjohn, Mr. Warren, Mr. Thompson, Mr. Mountain, Mr. Wells, Mr. Arnot, and Mr. Jewett. Mr. Hough took occasion to visit also the marble quarry at Hastings, and several other quarries in the vicinity of New York.

At the city of Boston, the Masonic Temple, the Howard Street Athenæum, the new Custom-house, the Merchants' Exchange, the new Theatre, and other structures, were visited. Mr. Rogers and Mr. Young were the architects conferred with.

At the city of Cincinnati, interviews were had with Mr. Daniels and Mr. Walter.

During the visits thus briefly sketched, a series of letters were written by Mr. Owen to Mr. Seaton, embodying the fruits of each day's exertion, and communicating very many details of great interest. These are best submitted to the board in their original form: the committee therefore annex them to this report.

Valuable letters have been received from David Dale Owen, Professor Silliman, and Professor Fowler, in relation specially to the comparative merits of marble and sandstone: these also are annexed, for the inspection of the board.

In order still further to assist the judgment of the board on the important point of the choice of material for the building, the committee have caused several sample walls of different stone to be thrown up for their examination.

It will be perceived, by the corrrespondence of Mr. Owen, that the architects with whom he conferred are required to transmit their several plans to the board by the 25th of December next. Until they are received, no definite choice can be made; and as "*the best material*," and "*the best modes of lighting and ventilating*," together with "*estimates of the cost*," could, in the opinion of the committee, only be safely determined by reference to the plan finally adopted, they have abstained from treating those points further than they are touched upon in the annexed correspondence.

"The selection of a site" is a subject also referred to this committee; but as it was made a matter of personal examination by the whole board at their last meeting, the committee respectfully confine themselves to reporting the following resolution:

Resolved, That the regents of the Smithsonian Institution do select and adopt as the site for their buildings so much of the Mall, in the city of Washington, as lies between Seventh street and the river Potomac, if the consent of the persons named in the fourth section of the act to establish the Smithsonian Institution for the increase and diffusion of knowledge among men be obtained thereto; and that upon such consent being obtained in due form, the Secretary is hereby instructed to cause the said ground so selected to be set out by proper metes and bounds.

All which is submitted by

G. M. DALLAS, *Chairman.*
WM. J. HOUGH.
ROBERT DALE OWEN.
JOS. G. TOTTEN.
W. W. SEATON.

WASHINGTON, *November* 30, 1846.

It remains to state that the committee of five appointed to "obtain plans for the erection of buildings," &c., unanimously selected, out of thirteen that were submitted to them by some of the principal architects throughout the country, two by Mr. James Renwick, jr., of New York city, the architect of Grace Church, the Church of the Puritans, Calvary Church, and other structures in and near New York; and they recommended to the board for adoption one of these, being a design in the later Norman, or, as it may with more strict propriety be called, the Lombard style, as it prevailed in Germany, Normandy, and in southern Europe, in the twelfth century. The design comprises a centre building, with two wings, connected with the main building by low ranges and a cloister. The entire front is 421 feet, and the extreme depth in the centre, including the carriage porch, 153 feet. The height of the principal tower is 145 feet, and that of the main building, to the summit of the battlement, 58 feet. The design includes all the accommodations demanded by the charter, to wit: a museum, 200 feet by 50; a library, 90 feet by 50; a gallery of art, in the form of a T, 125 feet long; two lecture rooms, one of which is capable of containing from 800 to 1,000 persons, and the other is connected with the chemical laboratory; a committee room for the Board of Regents; a Secretary's room; a room for the effects of Mr. Smithson; a Janitor's room, &c.

The contracts are not yet made; but the building committee hope to complete the structure, and to fit up and furnish the same, not only without encroachment on the capital of the institution, which by the act organizing the institution is expressly forbidden, but so as to leave a considerable portion of the amount specially set apart by that act for building unexpended.

The material for the exterior of the building has not yet been selected. The board has authorized the publication, by the building committee, of a small volume, which will give to the public the design of the building, and all important particulars regarding materials, &c.

The resolution accompanying the report was taken up for consideration; and pending the question on the adoption thereof,

The board adjourned until to morrow, at 12 o'clock, meridian.

TUESDAY, DECEMBER 1, 1846.

Mr. Evans, one of the regents, appeared.

The Chancellor laid before the board the following letter from Chief Justice Taney, a regent of the institution:

BALTIMORE, *November* 28, 1846.

DEAR SIR: I regret that it will not be in my power to attend the meeting of the regents of the Smithsonian Institution on Monday next. The circuit court for the district of Maryland has been in session since the beginning of this month, and must continue in session all of next week, in order to dispose of the business before it. Be good enough to mention to the board the cause of my absence, and believe me to be, with great respect, your obedient servant,

R. B. TANEY.

GEORGE M. DALLAS,
Vice President of the United States, Washington.

Mr. Breese presented sundry letters and recommendations relative to applications for office, agencies for the purchase of books, &c., which were placed on file for future consideration.

Mr. Rush, from the committee appointed to ascertain whether Madam De la Batut still survives, and if not, what steps are necessary to obtain the remainder of the Smithsonian fund reverting to the United States at her death, and if she is still living, what steps are necessary to obtain the fund at her death, made a report thereon in part, stating that he had written to Messrs. Clarke, Fynmore, and Fladgate, solicitors, residing in London, making the proper inquiries, but had received no answer.

Mr. Owen, from the Committee on the Organization of the Institution, made a report, accompanied by a series of resolutions, which were read.

The board proceeded to the consideration of the resolution pending yesterday when the board adjourned.

Mr. Seaton proposed that the same be amended, by inserting after the word "Potomac" the following:

"*Intending to authorize the erection of a monument to George Washington, by the Washington Monument Association, on a part of the said site, which lies between Fourteenth street and the river.*"

Mr. Evans moved that the said amendment be amended by substituting therefor the following: "subject to the power of Congress to grant any portion of the same west of Fourteenth street to the Washington Monument Society, for the purpose of erecting a monument thereon;" which Mr. Seaton accepted.

The amendment was then agreed to, and the resolution, as amended, was agreed to.

And so it was

Resolved, That the regents of the Smithsonian Institution do select and adopt, as the site for their buildings, so much of the Mall, in the city of Washington, as lies between Seventh street and the river Potomac, subject to the power of Congress to grant any portion of the same west of Fourteenth street to the Washington Monument Society, for the purpose of erecting a monument thereon, if the consent of the persons named in the fourth section of the act to establish the Smithsonian Institution for the increase and diffusion of knowledge among men be obtained thereto; and that, upon such consent being obtained in due form, the Secretary is hereby instructed to cause the said ground so selected to be set out by proper metes and bounds.

On motion of Mr. Evans,

Ordered, That the committee on the selection of a site be instructed to wait upon the President of the United States, and lay before him a certified copy of said resolution; and that the Secretary communicate a copy of the same to each of the officers mentioned in the act of Congress establishing the institution.

On motion of Mr. Evans,

Ordered, That the Chancellor and each chairman of a committee be a committee to prepare "a report of the operations, expenditures, and condition of the institution," for submission to Congress, agreeably to the third section of the act establishing the same.

The board adjourned until to-morrow, at 12 o'clock, meridian.

WEDNESDAY, December 2, 1846.

Mr. Choate, one of the regents, appeared.

A motion was made by Mr. Breese to reconsider the vote by which the board yesterday adopted the resolution selecting and adopting a site for their buildings.

After debate,

The motion of Mr. Breese was postponed until to-morrow.

The resolutions reported yesterday by Mr. Owen, from the Committee on Organization, came up in order for consideration.

At the suggestion of Mr. Choate that he wished to examine the report accompanying them,

On motion of Mr. Owen, they were further postponed until to-morrow.

Mr. Breese laid on the table the following resolution:

Resolved, That at one o'clock, p. m., to morrow, the board will proceed to the election of a secretary of the institution.

The board adjourned until to-morrow, at 12 o'clock, meridian.

THURSDAY, December 3, 1846.

Mr. Choate, from the committee appointed at the meeting of the regents in September in relation to the formation of a library, made a report, which was read and laid on the table.

On motion of Mr. Owen, the resolutions accompanying the report made by him from the Committee on Organization were taken up for consideration.

Mr. Owen moved that the board proceed to consider the resolution relative to the qualifications of secretary, and numbered 13;

Which motion was agreed to.

The said resolution was then read, as follows:

[No. 13] *Resolved*, That it is essential, for the advancement of the proper interests of the trust, that the Secretary of the Smithsonian Institution be a man possessing weight of character, and a high grade of talent; and that it is further desirable that he possess eminent scientific and general acquirements; that he be a man capable of advancing science and promoting letters by original research and effort, well qualified to act as a respected channel of communication between the institution and scientific and literary individuals and societies in this and foreign countries; and, in a word, a man worthy to represent before the world of science and of letters the institution over which this board presides.

And the question being put on agreeing to the same,

It was decided in the affirmative.

The remainder of the resolutions were then postponed for the present.

On motion of Mr. Owen,

The board then proceeded to elect a secretary by ballot, when it appeared that there were twelve votes cast, of which Professor Joseph Henry, of Princeton, New Jersey, had a majority, and was declared by the Chancellor duly elected Secretary of the institution.

The board proceeded to the consideration of the motion made by Mr. Breese yesterday, that the vote by which the resolution adopting a site for the buildings of the institution be reconsidered.

And the question being put, Will the board reconsider the said vote?

It was decided in the negative.

So the said resolution stands adopted.

The board adjourned until 10 o'clock, a. m., to-morrow.

FRIDAY, December 4, 1846.

The board proceeded to the consideration of the resolutions accompanying the report of the Committee on Organization; when

The following of the said resolutions (numbered as they were reported) were read and agreed to, viz:

[No. 3.] *Resolved*, That the Secretaries of State, of the Treasury, of War, and of the Navy of the United States, be respectfully invited to furnish to consuls and other public officers, in this and foreign countries, under their respective departments, such suggestions as they may deem proper in regard to the procurement, as opportunity offers, of additions to the museum of the institution, especially to its ethnological department; that three hundred copies of this report, when printed, be placed at the disposal of each of the above named Secretaries, as an explanation to these public functionaries of the views of the institution in regard to a museum; and that five hundred dollars be, and the same is hereby, appropriated, out of the accruing interests, to pay transportation or other expenses connected with the transmission from foreign parts to Washington of any collections thus made; and to such contributions, when placed in the museum, the name of the officer obtaining and forwarding the same shall in all cases be appended.

[No. 4.] *Resolved*, That the Secretary of War be respectfully invited to furnish to the Commissioner of Indian Affairs such suggestions as he may deem proper regarding the procurement from the Indian country of collections for the museum of the Smithsonian Institution, illustrating the natural history of the country, and more especially the physical history, manners and customs, of the various tribes of aborigines on the North American continent; that one hundred copies of this report, when printed, be placed at his disposal, as a means of informing the various Indian agents of the special character of the collections desired; and that the sum of five hundred dollars be, and the same is hereby, annually appropriated, out of the accruing interests of the Smithsonian Institution, for the procurement and transportation of such Indian collections; and, when placed in the museum there shall be appended to each the name of the agent through whom the same may be procured.

[No. 5.] *Resolved*, That the public generally be invited to furnish contributions to the museum of the Smithsonian Institution; and that all such contributions, when considered worthy of a place, shall be labelled with the name of the donor.

[No. 6.] *Resolved*, That ten copies of the report accompanying these resolutions be furnished to each member of the Senate and House of Representatives, and each member be respectfully requested to transmit these to newspapers and to individuals, in his district or elsewhere, who may be likely to take an interest in the proceedings of the institution.

[No. 12.] *Resolved*, That for the year eighteen hundred and forty-seven the sum of one thousand dollars be, and the same is hereby, appropriated for laying out the grounds of the institution, and for the purchase, transplantation, and temporary fencing of the trees therein; to be expended under the direction of the Executive Committee.

[No. 15.] *Resolved*, That of this report, in such form as it may be ultimately adopted, five thousand copies be printed, under the direction of the Secretary; and that he be required to transmit a copy of the same to each of the principal scientific and literary societies both in this and in other countries; and also to such individuals, of scientific or literary reputation, as he may judge likely to find interest in the proceedings of the institution.

The board proceeded to the consideration of the following resolution:

[No. 1.] *Resolved*, That for the present, out of the interest accruing to the institution, the sum of twenty thousand dollars be, and the same is hereby, appropriated for the purchase of books and the gradual fitting up of a library, and all other incidental expenses relating to the library, except the salaries of the librarian or librarians; the said appropriation to commence from the first of January, eighteen hundred and forty-eight.

A motion was made by Mr. Hough that the same be amended, by striking out "twenty thousand dollars," and inserting "*twelve thousand dollars*;"

Which motion was disagreed to.

Mr. Rush moved that "twenty thousand dollars" be stricken out, and "fifteen thousand dollars" inserted;

Which motion was disagreed to.

The question was then put, Will the board agree to the resolution?

And was decided in the affirmative.

The following resolution was then read and agreed to, viz:

[No. 2.] *Resolved*, That the portion of the building to be for the present set apart for a library be of sufficient capacity to contain not less than one hundred thousand volumes; and that it is desirable that the plan should be such as to render an extension practicable if hereafter desired.

The following resolution was then read and agreed to, viz:

[No. 11.] *Resolved*, That for the present the sum of four thousand dollars, out of the interest accruing to the institution, be appropriated for the purchase of philosophical and chemical apparatus, models, &c.; the said appropriation to commence on the first day of January next.

The following resolutions, Nos. 7, 8, 9, 10, and 14, were read; and, upon suggestions that it was desirable that the Secretary elect should be consulted before their adoption, they were postponed until the next meeting of the Board of Regents.

[No. 7.] *Resolved*, That it is expedient to include ultimately in the plan of the institution popular lectures on useful subjects—as on agriculture and its latest improvements; on the productive arts of life; on the sciences, and the aid they bring to labor; on common school instruction, including the proper construction of school rooms, the most improved apparatus for teaching, and most judicious management, moral and intellectual, of children in common schools; also, if suitable lecturers be found, on history, natural and civil, including the physical history of the various races of men, and the gradual advance of each to its present state of civilization; on political economy, in its practical connexion with the every-day business of life; and generally on any department of useful knowledge not strictly professional.

[No. 8.] *Resolved, further*, That if the funds of the institution permit, it is desirable that such lectures should be delivered not only at Washington, but gradually and successively at different points in all the States in the Union, either by permanent professors or temporary lecturers, engaged on behalf of the institution.

[No. 9.] *Resolved*, That, if the funds of the institution permit, there may be properly included in the plan the publication, periodically or otherwise, of popular tracts on the above subjects.

[No. 10.] *Resolved*, That, as one of the most effectual means of increasing knowledge among men, it shall be made a part of the duty of one or more of the officers who may be engaged by the institution to institute original researches in the branch of science to which he may be devoted; and that it shall be the duty of the Secretary, when such researches eventuate successfully, to communicate the results to other scientific societies throughout the world; and to invite, in return, communications of a similar character from them.

[No. 14.] *Resolved*, That, in case of the organization of a board of professors, the said Secretary shall be *ex officio* president of the said board of professors, with the usual rights and powers of the president of a Faculty; and, as president of said board, it shall be his privilege, when thereto authorized by said board, to make, on their behalf, any statement or representation to the Board of Regents, either written or verbal; and if any debate or discussion arise thereupon in the Board of Regents, he shall have the right to join therein; but in all cases without a vote in said Board of Regents.

The board proceeded to the consideration of the resolutions reported yesterday by Mr. Choate, from the committee on the formation of a library, which were read and agreed to, as follows:

[No. 1.] *Resolved*, That it be recommended to the Secretary of the Smithsonian Institution forthwith to employ, subject to the approval of the Board of Regents, an assistant secretary, well qualified to discharge the duties of librarian.

[No. 2.] *Resolved*, That a committee be appointed, in conjunction with the Secretary, to prepare and submit to this board extended lists of books, in the different departments of learning, proper to be first purchased, according to the general principles of this report; and, for this purpose, that they be authorized to request the aid of the librarian, and of other persons competent to afford it, and to engage to such person the honor of the board for discretionary remuneration of such aid.

Mr. Choate, Mr. Hilliard, and Mr. Rush were appointed the said committee.

On motion of Mr. Owen,

Resolved, That the salary of the Secretary, appointed under the 13th resolution reported by the Committee on Organization, and adopted by the board on the 3d instant, be three thousand five hundred dollars per annum, to commence from the date of his acceptance of the office.

Resolved, That, until a permanent residence be provided for the Secretary in the buildings to be erected, a sum not exceeding five hundred dollars annually be appropriated to pay the rent of his residence.

The board adjourned until to-morrow, at 10 o'clock, a. m.

SATURDAY, December 5, 1846.

Mr. Owen offered the following resolution, which was read, considered, and agreed to, viz:

Resolved, That the Assistant Secretary cause one thousand copies of the journal of the Board of Regents, from the commencement of its organization to the close of this meeting, to be printed in the same form as the pamphlet already printed by this board, and that he forward twenty-five copies thereof to each of the regents.

Mr. Totten offered the following resolution, which was read, considered, and agreed to unanimously:

Whereas the present meeting of the board may probably be the last at which the services of Mr. Hough, regent from New York, as Secretary, will be required,

Resolved, That the thanks of the board are respectfully offered to that gentleman for the prompt, valuable, and disinterested service he has rendered as Secretary.

On motion of Mr. Bache,

Resolved, That the Executive Committee be authorized to arrange with the Secretary the time and manner of the discharge of the duties enjoined on him by law, and by the resolutions of the regents.

Resolved, That a committee of three be appointed by the Chancellor to procure the introduction, if they deem it expedient, of a bill amendatory of the act establishing this institution.

Mr. Owen, Mr. Hough, and Mr. Evans were appointed the said committee.

On motion of Mr. Owen,

Resolved, That the Secretary of the Smithsonian Institution be entitled to participate in the deliberations of the Board of Regents, but without vote.

On motion of Mr. Evans,

Ordered, That when this board adjourn to-day, it adjourn to meet on the second Wednesday of this month, at the room of the Vice President of the United States, in the Capitol, at 11 o'clock, a. m.

The board then adjourned accordingly.

Journal of proceedings of the Smithsonian Institution at their second meeting.

WEDNESDAY, December 9, 1846.

This being the second Wednesday of December, the Board of Regents met, pursuant to their resolution of the 9th day of September last, fixing their regular meetings.

Present, George M. Dallas, Chancellor; William W. Seaton, George Evans, Robert Dale Owen, William J. Hough, Richard Rush, A. D. Bache, Joseph Totten.

The number fixed by the act establishing the Smithsonian Institution as a quorum being five, a quorum was in attendance.

At 11 o'clock, a. m., the Chancellor took the chair and called the board to order.

Mr. Hough, from the committee appointed to wait on the President of the United States and the other persons named in the fourth section of the act to establish the Smithsonian Institution, and obtain their written consent to the selection and appropriation of the public reservation called the "Mall," west of Seventh street west, in the city of Washington, by the regents, as a site for the necessary buildings for said institution, reported:

That on the fifth day of December instant he called upon the President of the United States and the other persons named in said fourth section of the act establishing said institution, and solicited their assent to the selection and appropriation by said regents of all that portion of said reservation lying west of Seventh street west, in said city, as a site for the necessary buildings for said institution, pursuant to the resolution of the Board of Regents heretofore passed making such selection and appropriation, but that he was unable to obtain the consent of all of said persons, although a portion of them signified their readiness to give such consent; and that inasmuch as it seemed necessary that the assent of each and all of said persons be obtained to the validity of such selection and appropriation, the committee did not deem it of importance to obtain the written consent of such of said persons as signified their willingness to the same, not being able to procure the whole. The committee, therefore, submit the following resolution for the consideration of the regents, and recommend the passage thereof.

The said resolution was then read and adopted, as follows:

Whereas the consent of all the persons named in the fourth section of the act to establish the Smithsonian Institution has not been obtained to the selection and appropriation of the public reservation called the "Mall," west of Seventh street west, in the city of Washington, by the regents, as a site for the necessary buildings of said institution: Therefore,

Resolved, That a committee of three be appointed by the Chancellor to confer with the President of the United States and the other persons named in the fourth section of said act, and ask their consent to the selection by said regents of that portion of said reservation lying between Seventh and Twelfth streets west, in said city, as the site for the necessary buildings of said institution; and, if such consent be given,

It is further resolved, That said buildings be located thereon, and at least two hundred and fifty feet south of the centre thereof.

Mr. Hough, Mr. Owen, and Mr. Evans were appointed the said committee.

Mr. Seaton presented a communication from Mr. George Catlin, accompanied by a printed catalogue of his Indian Gallery, offering his collection of Indian memorials to the Smithsonian Institution, which was referred to the committee on the formation of a library.

On motion of Mr. Owen,

Ordered, That when this board adjourn to-day, it adjourn to meet on Monday next, at 10 o'clock, a. m.

And then, on motion of Mr. Evans,
The board adjourned until Monday next, at 10 o'clock, a. m.

MONDAY, December 14, 1846.

The Chancellor laid before the board a letter from Professor Henry, accepting the appointment of Secretary of the Smithsonian Institution.

Mr. Hough, from the committee appointed on the 9th instant to confer with the President of the United States and the other persons named in the fourth section of the act establishing the institution, made a verbal report, stating that the committee had had an interview with the President and the persons mentioned, but had come to no final conclusion as to the matter for which they were appointed.

And then the board adjourned until Monday next, at 10 o'clock, a. m.

MONDAY, December 21, 1846.

Chief Justice Taney, one of the regents, appeared.

Joseph Henry, the Secretary elect of the Board of Regents and of the Smithsonian Institution, appeared, and entered upon the duties of his office.

Mr. Owen, from the committee appointed on the 9th instant to confer with the President of the United States and the other persons mentioned in the fourth section of the act of Congress establishing the Smithsonian Institution, in relation to the location of the buildings of the institution, reported verbally that the committee had had an interview with those persons, but had not yet received their final decision upon the subject.

On motion of Mr. Owen,

Resolved, That the report made by Mr. Owen, on the 1st day of December instant, from the Committee on the Organization of the Institution, together with the resolutions accompanying the same, which have not been agreed to by the board, be recommitted to said committee.

The board adjourned until Wednesday next, at 10 o'clock, a. m.

WEDNESDAY, December 23, 1846.

Mr. Hough, from the committee appointed on the 9th instant to confer with the President of the United States and the other persons named in the fourth section of the act establishing the Smithsonian Institution, and to ask their consent to the selection by said regents of that portion of the public reservation called the "Mall," lying between Seventh and Twelfth streets, in the city of Washington, as the site for the necessary buildings of said institution, made a verbal report, accompanied by a copy of the preamble and resolutions adopted on the 9th instant, endorsed as follows, viz:

"The consent of all the persons named in the fourth section of the act to establish the Smithsonian Institution is not given to the site herein selected.

"JAMES K. POLK."

On motion of Mr. Owen,

Resolved, That the regents of the Smithsonian Institution do select and appropriate, as the site for their building, the south half of so much of the "Mall," in the city of Washington, as lies between Ninth and Twelfth streets, if the consent of the persons named in the fourth section of the act of Congress establishing said institution be obtained thereto; and the said ground so selected shall be set out by proper metes and bounds, and a description of the same shall be made, and recorded in the book of records of the proceedings of the Board of Regents, and signed by the regents.

On motion, Mr. Hough, Mr. Owen, and Mr. Evans were appointed a committee to communicate the said resolution to the President of the United States and the other persons named in the fourth section of the act establishing the Smithsonian Institution.

And then the board adjourned until Wednesday, the 20th day of January next, then to meet at the Vice President's room, in the Capitol, at 10 o'clock, a. m.

WEDNESDAY, January 20, 1847.

The Board of Regents met pursuant to their resolution of adjournment, adopted on the 23d day of December last.

Hon. Lewis Cass, one of the regents, appeared.

The committee appointed relative to the selection of a site for the building of the Smithsonian Institution made a report thereon, communicating the consent of the President of the United States, and the other persons named in the act establishing the institution, to the selection and appropriation of the site selected by the regents.

The Chancellor presented a letter from the Assistant Secretary and librarian *pro tempore*, containing a list of books presented to the Smithsonian Institution, in compliance with the tenth section of the act of Congress establishing the institution.

The following resolutions, reported by the committee appointed on the 9th day of September last to select a plan for a building for the institution, were taken up and agreed to:

Resolved, That the Norman plan of a building for the Smithsonian Institution, furnished by James Renwick, jr., of New York, substantially as amended agreeably to the suggestions of the committee, is approved and adopted by this board.

Resolved, That, as testimonials of the high sense entertained by this board of the scientific merit and skill displayed in their respective plans, the following premiums be awarded to the gentlemen named:

To Messrs. Wells and Arnot - - -	$250
Mr. John Notman - - -	250
Mr. John Haviland - - -	250
Mr. Owen J. Warren - - -	250

and that one thousand dollars be appropriated for that purpose.

Resolved, That a committee of three members of the board, as provided for in the fifth section of the act of Congress, be appointed, who shall be empowered, on behalf of the Smithsonian Institution, to enter into contracts for the completion of the buildings, and to take security for their being finished according to the plan adopted by the board, and within the time that may be stipulated; and that said committee have authority to employ one or more persons to superintend the erection of the buildings and the fitting up the rooms of the institution.

Mr. Seaton offered the following resolution, which was read and agreed to:

Resolved, That all the architects who have presented plans for the consideration of the building committee be informed that the Board of Regents will hear any explanations they may desire to make in relation to their respective designs, to-morrow at 10 o'clock, a. m.

The board adjourned until to-morrow, at 10 o'clock, a. m.

THURSDAY, January 21, 1847.

Mr. Evans offered the following resolutions, accompanying them with remarks suitable to the occasion:

Resolved, That the regents of the Smithsonian Institution have learned with profound sensibility that since their last meeting, the Honorable Isaac S. Pennybacker, late a member of this board, has departed this life.

Resolved, That in testimony of their high respect for the memory of their late associate, the members of this board will wear the customary badge of mourning for the period of thirty days.

Resolved, That these resolutions be entered upon the journal, and a copy of them be transmitted to the widow of the deceased.

The resolutions being read, were agreed to unanimously.

The board adjourned until to-morrow, at 10 o'clock, a. m.

FRIDAY, January 22, 1847.

The sitting this and the following day was occupied in hearing the explanations of Messrs. Arnot, Notman, Haviland, Rogers, Mills, Renwick, and Archer, of their respective plans.

MONDAY, January 25, 1847.

The Committee on Organization, to which was recommitted, on the 21st December last, the report made by Mr. Owen on the 1st December last, together with the resolutions accompanying the same, which had not been agreed to by the board, reported back the same in an amended form, accompanied by sundry resolutions; which report and resolutions were laid upon the table.

The said report is as follows:

"For the increase and diffusion of knowledge among men," were the words of Smithson's will—words used by a man accustomed to the strict nomenclature of exact science. They inform us that a plan of organization, to carry into effect the intention of the testator, must embrace two objects: one, the calling forth of new knowledge by original research; and the other, the dissemination of knowledge already in existence.

Smithson's words, liberal and comprehensive, exclude no branch of human knowledge; nor is there any restrictive clause in the charter under which we act. That charter indicates a few items chiefly relating to one of the above objects, and leaves the rest of the plan, under the general provision of the bequest, to the discretion of the board.

First. It sets forth, as one of the objects of the institution, a library, that shall contain valuable works in all departments of human knowledge.

Second. It requires that there be provided in the buildings of the institution a hall, or halls, suitable for a museum capable of containing, on a liberal scale, collections of natural history, including geology and mineralogy, and objects of foreign and curious research; the large collection now in the Patent Office being transferred to the institution.

Third. It requires that there be included in said building a chemical laboratory.

Fourth. The building is to contain, also, "the necessary lecture rooms." And,

Fifth. A gallery of art.

These items, with the exception, perhaps, of the laboratory, relate to the diffusion of knowledge only. They render necessary an annual appropriation to collect and support a library; another to maintain a museum; and indicate an intention that a portion of the annual interest should be applied to the advancement of physical science and the arts, in part, by lectures.

But, after enumerating these items, the framers of the charter added a clause of plenary powers authorizing the board, as to all funds not required for the above special purposes, to make of them "such disposal as they shall deem best suited for the promotion of the purpose of the testator."

In obedience to the requirements of the charter, which leaves little discretion in regard to the extent of accommodations to be provided, your committee recommend that there be included in the building a museum of liberal size, fitted up to receive the collections destined for the institution; and that library room sufficient for a hundred thousand volumes be provided. They further recommend that the lecture rooms required by the act shall not exceed two in number, of which one of a small size should adjoin the laboratory, and another might be large enough to receive an audience of a thousand persons.

As important as the cabinets of natural history by the charter required to be included in the museum, your committee regard its ethnological portion, including all collections that may supply items in the physical history of our species, and illustrate the manners, customs, religions, and progressive advance, of the various nations of the world; as, for example, collections of skulls, skeletons, portraits, dresses, implements, weapons, idols, antiquities, of the various races of men.

In the accumulation of these collections, the institution has at command great facilities. The collections of the exploring expedition, which already belong to its museum, furnish an ample commencement, especially as regards Polynesia. Through the Commissioner of Indian Affairs, and the various agencies under his control, the North American race can be reached; and at small expense the collection of Indian curiosities, already begun at the Patent Office, may be rapidly extended. So, through our army and navy officers, and our consuls in foreign nations, European and South American collections (the latter so recently enriched by modern discovery) might be gradually brought together.

In this connexion, your committee recommend the passage of resolutions asking the co-operation of certain public functionaries, and of the public generally, in furtherance of the above objects.

Your committee are further of opinion that in the museum, if the funds of the institution permit, might judiciously be included various series of models illustrating the progress of some of the most useful inventions; such, for example, as the steam engine, from its earliest and rudest form to its present most improved state; but this they propose only so far as it may not encroach on ground already covered by the numerous models in the Patent Office.

Specimens of staple materials, of their gradual manufacture, and of the finished products of manufactures and the arts, may also, your committee think, be usefully introduced. This would supply opportunity to examine samples of the best manufactured articles our country affords, and to judge her gradual progress in arts and manufactures.

As chemistry was the favorite study of Smithson's life, of which a considerable portion was spent in his own laboratory, and as it is, without doubt, one of the most comprehensive and important of the natural sciences, your committee recommend that this department be fitted up in as complete a manner as modern science can suggest. And for the purpose of encouraging in the young men of our country original research in the same branch of science in which Smithson himself successfully labored; and inasmuch as many are now compelled, in order to complete their studies as practical chemists, to resort to Paris or Germany, your committee further recommend that there be included in the building a working laboratory, somewhat, perhaps, after the model of that instituted by one of the ablest of German chemists, the celebrated Liebig; to be opened under proper regulations and supervision, without charge to those who may desire to institute experiments and prosecute researches for themselves in that science.

The gallery of art, your committee think, should include both paintings and sculpture, as well as engravings and architectural designs; and it is desirable to have in connexion with it one or more studios, in which young artists might copy without interruption, being admitted under such regulations as the board may prescribe. Your committee also think that as the collection of paintings and sculpture will probably accumulate slowly, the room destined for a gallery of art might properly and usefully meanwhile be occupied during the session of Congress as an exhibition room for the works of artists generally; and the extent and general usefulness of such an exhibition might probably be increased, if an arrangement could be effected with the Academy of Design, the Arts Union, the Artists' Fund Society, and other associations of similar character, so as to concentrate at the metropolis, for a certain portion of each winter, the best results of talent in the fine arts.

The charter provides that the Secretary of the institution may, with the consent of the board, employ assistants; and the items above enumerated, touching a library, museum, and laboratory, seem to demand at the proper time the appointment of not less than three such assistants; one as librarian, one as curator of the museum, and one as chemist. After a careful review of the means of the institution, and the annual demands upon it necessitated by the objects specially required in the charter, your committee are not prepared, with the present endowment only at command, to recommend a greater extension than these named of permanent offices requiring scientific or literary qualifications; and they think that the appointments of curator and chemist may be postponed until the time, or nearly the time, when the building is likely to be completed.

In these various recommendations your committee have been guided chiefly by the words and specific recommendations of the charter. They are of opinion, however, that the task assigned them would be ill performed if they stopped short here, and neglected to avail themselves of the authority—liberally and wisely, your committee think—conferred upon the board, after providing for the above special objects to such extent as they may consider necessary and proper, to dispose of the remaining funds annually accruing in such manner as "they shall deem best suited for the promotion of the purpose of the testator."

"Increase and diffusion of knowledge," your committee beg leave to report, was that purpose.

How can knowledge be increased?

By original research throughout its various fields; yielding, when successfully prosecuted, positive additions to the sum of what had heretofore been known.

For this there is no provision in the items specifically enumerated in the bill, and above provided for, except it may be in the chemical department, where the chemist or others engaging in experiment and investigation may furnish actual contributions to the science of chemistry.

But how may original researches generally be encouraged and called forth?

First, by premiums, your committee think, annually offered for original papers on such subjects as may be selected; it being a strict condition that each paper accepted and obtaining a premium shall contain a specific addition to the sum of human knowledge, resting upon original investigations, and not mere unverified hypotheses. The accepted paper may be published in the successive numbers of Transactions, which may be entitled "Smithsonian Contributions to Knowledge," and which your committee recommend to be issued periodically or occasionally, as materials present themselves. The names of the competitors for premiums should in all cases remain unknown until the award is made.

A liberal price might also be paid for other papers that may be considered worthy of a place in the Transactions.

Again: as an additional means of promoting increase of knowledge, special appropriations may occasionally be made to institute definite lines of research, under the direction of competent persons; after the manner, perhaps, of the British Association. Such appropriations, however, your committee think should be made with great care, for important objects only, and where there is fair promise of speedy result; and it might be advisable, as an additional guarantee, that in deciding the kind of research and the amount of money to be appropriated the board avail itself of the suggestions of a council of scientific men.

In the prosecution of researches undertaken at the instance of the institution, and requiring the aid of valuable apparatus, the use of that belonging to the institution might, under proper regulations, be granted.

This stimulating and cherishing of research in unexplored fields seems to your committee the more necessary and proper in a country like ours, where but few have at command that easy leisure common in older countries, and there permitting the prosecution of researches throughout years, or a lifetime, without expectation or necessity of pecuniary return.

Your committee are aware that the researches here recommended, no matter how intrinsically important—demanded as they are, too, by the wording of the bequest which endowed our institution—will be likely, in their inception and first publication, to interest a comparatively small circle only. The Transactions of the Institution can be expected to obtain but a limited circulation. Not that the discoveries there to be presented are of little intrinsic importance, and bear no practical fruit: the reverse is true. Some may be immediately productive; others will include investigations unproductive in themselves for the time, yet the necessary preliminaries to the actual discovery of modes and forms that become, in every-day life, productive and profitable; for invention is but the practical application of scientific results. But the severe investigations in physics which ultimately resulted in the steam engine and the magnetic telegraph—inventions that are now revolutionizing the world—attracted in their original form the attention only of the strictly scientific. To reach the people generally, other and further means must be employed. And this brings your committee to speak of the testator's second object—

The *diffusion* of knowledge among men.

In connexion with this branch of Mr. Smithson's purpose, your committee are reminded of the widespread and beneficent influence, reaching to the remotest hamlet and the humblest hearth, exerted not in England alone, but in other and distant countries, by the British "Society for the Diffusion of Knowledge," its Scientific Tracts, and its Penny Magazine.

This example indicates the most effectual mode of reaching the popular mind of the world. Influenced by the results of such experience, your committee recommend the issuing, to such extent as the funds of the institution permit, of publications, in brief and popular form, on subjects of general interest. They advise, also, that courses of free lectures be delivered during the session of Congress, in the lecture rooms of the institution, by its officers, or by able men, in the different branches of knowledge, who should be invited for the purpose, and paid out of the funds of the institution. It should also, your committee think, be made the duty of the Secretary and his assistants to exhibit in these lecture rooms, at stated periods, experimental illustrations of new discoveries in science, and interesting and important inventions in the arts.

And if now, or hereafter, the funds of the institution permit, they think it desirable that such lectures should not be restricted to Washington, but should be given, by lecturers selected by the institution, throughout the United States.

The difficulty in this latter recommendation is the great expense that must be incurred to procure the delivery of such lectures by men of suitable ability, throughout every section of the Union, without preference or omission.

Though neither the bequest nor the charter restrict the subjects that may be treated in publication and lecture, yet, as the funds of the institution are limited, and some selection from the vast range of human subjects of inquiry must be made, your committee recommend that, in the first place, the efforts of the institution be chiefly directed to the diffusion of knowledge in the physical sciences, in the useful arts, and the theory and practice of public education. They suggest that the lectures and popular publications of the institution may usefully treat of agriculture and its latest improvements; of the productive arts of life; of the sciences, and the aid they bring to labor; of common school instruction, including the proper construction of school-rooms, the most improved apparatus for teaching, and the most judicious management, moral and intellectual, of children in common schools. They might also, if suitable talent can be enlisted, treat of history, natural and civil, including the physical history of the various races of men, and the gradual advance of each to its present state of civilization; of political economy in its practical connexion with the every day business of life, and generally touch upon any department of useful knowledge not strictly professional.

By such means, we may reasonably expect gradually to stir up a love of science among those in whose minds, for lack of an awakening word, it now lies dormant; and, by directing the attention of the people generally to the rich sources of knowledge that everywhere exist around them and beneath their feet, by degrees to substitute, for the deleterious excitements sought in haunts of dissipation, the healthful and humanizing interest to be found in scientific research. The inestimable importance of common school education, and the practical means of increasing and improving it, might thus also be pressed home upon those whose children have often no other means of instruction or improvement.

As an additional means of diffusing knowledge, your committee suggest the publication of a series of reports, to be published annually, or oftener, containing a concise record of progress in the different branches of knowledge, compiled from the journals of all languages, and the transactions of scientific and learned societies throughout the world. The matter of these reports may be furnished by collaborators eminent in their respective branches; and these should be supplied with all the works necessary to a proper execution of their task, and paid in proportion to their respective labors. Copies of these Smithsonian Reports may be furnished to the principal libraries and scientific societies of the country free of expense, and sold to individuals at a small price.

Your committee beg leave here to remark, that with the limited annual income of the institution, charged as it is with extensive collections, to maintain which will prove a considerable yearly drain on its funds, they do not imagine or propose that all the recommendations here set down should be carried out, at least simultaneously. These are put forward as objects which your committee consider desirable and strictly within the purpose of the bequest. Such as may seem to the board the most important may be first attempted. Other portions of the plan may follow in their turn. And experience will gradually sift out whatever is most judicious and effective.

Your committee are of opinion that it does not come properly within the scope of our institution to impart professional education; and therefore they recommend no school of any of the learned professions, nor any professorships of ancient languages, or others of similar character. It is not, however, their purpose to exclude lectures of a general character on subjects connected with any of these professions, but only to shut out those courses of lectures which treat of them in professional detail. The studies referred to are already provided for in numerous institutions throughout the United States; and it has been the endeavor of your committee not only in this instance, but throughout the entire plan here submitted, to occupy, so far as may be, ground hitherto untenanted, and rather to step in where it comes not within the province of other institutions, learned or literary, to extend their efforts, than to compete with them in fields of labor peculiarly their own.

The party politics of the day, on which men differ so widely and so warmly, should not, your committee think, enter among the subjects treated of in any lecture or publication put forth under the sanction of the institution. And they would deeply regret to see party tests and party wranglings obtrude themselves on the neutral ground of science and education; jeoparding, as such intrusion surely would, the tranquillity of the institution, disturbing the even tenor of its action, perhaps assaulting its welfare, certainly contracting the sphere of its usefulness.

Your committee think it important that the institution, at the time it is first opened, should have already in its library a collection of such valuable works of reference as, in the prosecution of its plan, may be required. In order to attain that object, your committee recommend that, for the present, twenty thousand dollars be set aside for the purchase of books and filling up of the library.

An additional reason which has induced your committee to recommend, out of the accrued interest, so large an appropriation at the outset, is, that large annual appropriations from the accruing interest, after the institution is under way, are thereby rendered the less necessary.

In proposing that, in the building about to be erected, there should be provided library room sufficient to receive a hundred thousand volumes, your committee yielded rather to what seemed a fair concession to the spirit of the eighth section of our charter, than to their own deliberate conviction that a library of more than half that size could, with the present means of our institution, advantageously be purchased.

But, without a vast accumulation of books in this metropolis, your committee conceive that a librarian of the Smithsonian Institution may, under a proper system, become a centre of literary and bibliographical reference for our entire country. Your committee recommend that the librarian be instructed to procure catalogues, written or printed, of all important public libraries in the United States; and also, in proportion as they can be obtained, printed catalogues of the principal libraries in Europe, and the more important works on bibliography. With these beside him, he may be consulted by the scholar, the student, the author, the historian, from every section of the Union, and will be prepared to inform them whether any works they may desire to examine are to be found in the United States; and if so, in what library; or if in Europe only, in what country of Europe they must be sought.

Informed by these catalogues, it will be easy, and your committee think desirable, for those who may be charged with the selection of books to make the Smithsonian library chiefly a supplemental one; to purchase, for the most part, valuable works which are not to be found elsewhere in the Union; thus carrying out the principle to which your committee has already alluded as influencing all their recommendations—that it is expedient, as far as may be, to occupy untenanted ground.

Exceptions to this rule must here, of course, be made; as in the case of standard works of reference required for the immediate purposes of the institution, and also of the very numerous works, many of current science, which, by a proper system of exchanges, we may procure without purchase. In this latter connexion, the transactions and reports of the Institution will obtain for us valuable returns.

In following out this mode of collecting a library for the institution, whenever a particular class of works of importance is found to be specially deficient in the libraries of our country, the vacancy may be filled. The librarian might also procure, by entering into correspondence with the librarians of other countries, any special extracts or items of information required by students.

Your committee consider it inexpedient to commence the regular purchase of books until about a year before the time when the building is prepared to receive them. Meanwhile, lists and catalogues should be procured.

For the procurement of chemical and philosophical apparatus, models, &c., your committee recommend, for the present, an appropriation of four thousand dollars. If the funds permit, four thousand dollars more, your committee think, might profitably be appropriated for this object before the opening of the institution.

Inasmuch as the Chancellor of the Smithsonian Institution, being a regent, can receive no salary for his services, it results, almost necessarily, that the Secretary should become its chief executive officer. The charter seems to have intended that he should occupy a very responsible position; granting as it does to the Secretary, in conjunction with the Chancellor, the power to determine the necessity and the amount of appropriations made for the purposes of the Institution.

The office of Secretary must, in the opinion of your committee, be regarded not as one to be filled by any man capable to act as recording clerk, or to receive with politeness the visitors of the Institution, or to reply, with mechanical propriety, to its correspondents, but as an office on the due administration of which the executive efficiency of our institution at home and its reputation abroad mainly depend; an office, then, demanding, in its incumbent, weight of character and a high grade of talent.

To secure such stamp of talent as your committee consider essential in a Secretary of the Smithsonian Institution, it may be necessary to attach to the office a considerable salary. The best talent, in any country, ever commands a high remuneration; and though money cannot always command talent, it is, as a general rule, one of the elements necessary to obtain it. Inadequate character and qualifications are not worth purchasing at any rate, no matter how low. The money spent to procure them is utterly cast away.

Your committee think it would be an advantage if a competent Secretary could be found, combining also the qualifications of a professor of the highest standing in some branch of science. If to these be added efficiency as an executive officer and a knowledge of the world, we may hope to see filling this distinguished post a man who, when brought into communication with distinguished men and societies in this and other countries, shall be capable, as representative of the Smithsonian Institution, to reflect honor on the office, not requiring to borrow distinction from it.

Your committee will not withhold their opinion, that upon the choice of this single officer, more probably than on any one other act of the board, will depend the future good name, and success and usefulness, of the Smithsonian Institution.

A similar view, your committee believe, has been taken of this matter by the principal scientific societies throughout the world. Newton disdained not to answer, at much length, the friendly and able criticisms on some of his theories, addressed to him by Oldenburg, first secretary of the London Royal Society; and the name of Arago, secretary of the Academy of Sciences, of Paris, is known and honored wherever science extends her sway.

All which is respectfully submitted.

ROBERT DALE OWEN,
Chairman.

The board adjourned until to-morrow, at 12 o'clock, meridian.

TUESDAY, January 26, 1847.

The board proceeded to the consideration of the series of resolutions offered from the Committee on Organization, yesterday; and, after debate, they were agreed to, the series of resolutions being as follows:

1. *Resolved*, That it is expedient, and demanded by the will of the testator, that in our plan of organization the increase of knowledge by original research should form an essential feature; that in furtherance of this object, premiums be offered, at such times and to such amounts as the board may hereafter decide, for original papers, containing positive additions to the sum of human knowledge; and that these, together with other suitable papers, be published in transactions of the institution, to be entitled "Smithsonian Contributions to Knowledge," and to be issued periodically or occasionally, in quarto form, as materials may be obtained.

2 *Resolved*, That it is within the strict purpose of the trust, and may materially advance its legitimate objects, occasionally to make specific appropriations for definite lines of research, the results to be published as above.

3. *Resolved*, That, with a view to the diffusion of knowledge, there may be included in the plan of organization the issuing of publications, in brief and popular form, on subjects of general interest.

4. *Resolved*, That, with a similar object, there may also properly be included in the plan of organization the issuing of periodical reports containing records of the progress of knowledge in its different branches.

5. *Resolved*, That there may also properly be included in the plan free lectures, to be delivered by competent persons, on useful subjects; and that it may advantageously be made a part of the duty of the Secretary and his assistants to give in the lecture rooms of the institution, at stated periods, illustrations of discoveries in science and important inventions in the arts.

6. *Resolved*, That it is the intention of the act of Congress establishing the institution, and in accordance with the design of Mr. Smithson, as expressed in his will, that one of the principal modes of executing the act and the trust is the accumulation of collections of specimens and objects of natural history and of elegant art, and the gradual formation of a library of valuable works pertaining to all departments of human knowledge, to the end that a copious storehouse of materials of science, literature, and art may be provided, which shall excite and diffuse the love of learning among men, and shall assist the original investigations and efforts of those who may devote themselves to the pursuit of any branch of knowledge.

7. *Resolved*, That for the purpose of carrying into effect the two principal modes of executing the act and trust pointed out in the resolutions herewith submitted, the permanent appropriations out of the accruing interest shall, so soon as the buildings are completed, be annually as follows; that is to say:

First, for the formation of a library composed of valuable works pertaining to all departments of useful knowledge, and for the procuring, arranging, and preserving of the various collections of the institution, as well of natural history and objects of foreign and curious research and of elegant art as others, including salaries and all other general expenses connected with the same, excepting those of the first complete arrangement of all such collections and objects as now belong to the United States in the museum of the institution, when completed, together with one-half of the salary of the Secretary, the sum of fifteen thousand dollars.

Secondly, for the preparation and publication of transactions, reports, and all other publications of the institution, including appropriations for original researches and premiums for original papers; for the delivery of all lectures and payment of all lecturers, and for all general expenses connected with said lectures and publications, together with one-half of the salary of the Secretary, the remainder of the annually accruing interest; it being understood that all general and incidental expenses not specially connected with either of the above two great divisions of the plan of the institution shall be equally divided between them.

Mr. Bache offered the following resolutions, which were read, considered, and agreed to:

Resolved, That the Secretary of the Smithsonian Institution be instructed to present to the Committee on Organization a plan for executing the resolutions relating to Smithsonian contributions, to annual reports and other publications, to premiums, and to original researches.

Resolved, That said committee, in conjunction with the Secretary, be authorized to publish in quarto form a number of the Smithsonian contributions to science, as soon as suitable materials are collected for the same, of which the Secretary and committee shall judge, provided that the expense thereof shall not exceed one thousand dollars; which sum is hereby appropriated to that object from the income of the institution for the year 1847.

Resolved, That the Chancellor of the Smithsonian Institution be requested to prepare a biographical notice of Mr. Smithson for the first number of the contributions.

Resolved, That the Secretary of the Smithsonian Institution be requested to continue his researches in physical science, and to present such facts and principles as may be developed, for publication in the Smithsonian contributions.

Resolved, That the Secretary of the Smithsonian Institution be authorized and requested to communicate with men eminent in science and literature, and to ask their advice, in behalf of the institution, in regard to the subjects for which premiums shall be offered, and upon which reports and essays shall be prepared.

Resolved, That the Committee on Organization present, for the approval of the board at its next meeting, the details of the plans which they may recommend, in pursuance of the foregoing, for the increase and diffusion of knowledge among men.

Mr. Hilliard offered the following resolutions, which were read, and, after debate, were ageed to:

Resolved, That the salary of the Assistant Secretary, acting as librarian, shall be two thousand dollars.

Resolved, That the Secretary be requested now to nominate to the board an assistant, who shall be the librarian, and whose salary shall commence whenever the building is ready for the reception of the library.

Resolved, That for any services rendered from this time, in collecting books, making catalogues, &c., he shall receive such compensation as the Executive Committee may deem reasonable.

Whereupon the Secretary remarked, that, understanding Professor Charles C. Jewett, of Brown University, to be the preference of a majority of the board, he therefore nominated Charles C. Jewett for Assistant Secretary, acting as librarian, of the Smithsonian Institution.

Mr. Evans offered the following resolution, which was read and agreed to:

Resolved, That this board do approve the nomination of Charles C. Jewett, and consent to his employment as an Assistant Secretary, to act as librarian.

The board then adjourned.

THURSDAY, January 28, 1847.

Mr. Owen offered the following resolutions, which were read, considered, and agreed to:

Resolved, That the Norman plan of a building for the Smithsonian Institution, furnished by James Renwick, jr., of New York, substantially as amended and reduced agreeably to the suggestions of the committee, is approved by the board.

Resolved, That a building committee of three members of the board, as provided in the fifth section of the act of Congress, be appointed, who are hereby authorized and empowered, on behalf of the Smithsonian Institution, to enter into contracts for the completion of the building; and that said committee have power to employ one or more persons to superintend the erection of the building and the fitting up of the rooms of the institution; and that the work shall be done to the entire satisfaction of the said superintendent or superintendents; and the said superintendent or superintendents shall have power, and shall be required, to reject any of the material proposed to be employed, and also to object to inferior or insufficient work, and to direct its change, at his or their discretion.

Resolved, That in the performance of the duty intrusted to them, the building committee of three hereinbefore referred to shall give the contracts to the lowest bidder of reputation, who shall give unexceptionable security, to the entire satisfaction of the committee, for the performance of said contracts; and such security shall in all cases be taken. No advance shall in any case be made; and fifteen per cent. of all payments shall be retained until the faithful performance of the work.

Resolved, That the building committee, after taking counsel with the Secretary, shall carefully revise the specifications of the plan furnished to this board by the architect, before entering into any contract; and if, after such examination, they shall be of opinion that any modifications of the said plan and specifications are necessary for the safety, durability, or better adaptation of the structure, they may incorporate these in the said specifications; but no addition to the dimensions of the building shall be made, nor any ornament of any kind be added; and the said modifications shall have sole reference to the safety, durability, and adaptation of the building. And the whole amount of the contract for the said building, including the modifications above provided for, shall, under no circumstances, exceed the amount of the original estimates of the architect, to wit: the sum of two hundred and ten thousand dollars, with a per centage not exceeding ten per cent. on the said sum.

Resolved, That the building committee be also authorized to contract for the warming and lighting of the building; provided that the contract for the above objects shall not exceed five thousand dollars.

Resolved, That the building committee be also authorized to contract for the fitting up and furnishing of the buildings of the institution; provided that the contract for the same shall not exceed twenty thousand dollars.

Resolved, That the building committee be also authorized to contract for a permanent fence around the grounds belonging to the institution; provided the contract for the same shall not amount to more than ten thousand dollars.

Resolved, That the Secretary of the institution be authorized to contract for the necessary chemical and philosophical apparatus, for which an appropriation of four thousand dollars has heretofore been made.

Resolved, That the building committee be authorized to contract for the grading, laying out, and planting of the grounds of the institution; and that three thousand dollars, in addition to the one thousand dollars heretofore appropriated, be, and the same is hereby, appropriated for that purpose.

And it being on the one hand desirable that a portion of the buildings to be erected by the institution be ready for use at an early day, and it being on the other essential to the solidity and durability of a structure of the size required to embrace all the objects specified in the act of Congress, that its erection be gradual and not too rapidly hastened forward: Therefore,

Resolved, That the building committee be instructed to arrange the contracts for the buildings of the institution so that the wings of said building may be completed in two years from the present time, and the whole to be completed in five years.

Mr. Owen also offered the following resolution:

Resolved, That the Executive Committee certify to the Chancellor and Secretary of the board the total amount of debts incurred, contracts entered into, and contracts authorized by the board; and that the Chancellor and Secretary, after examination and approval of the same, certify the same to the proper officer of the treasury for payment.

The said resolution was read; when

Mr. Evans moved to amend the same by adding thereto the following, as an additional resolution:

Resolved, That the Executive Committee be authorized to receive said payment in treasury notes payable to the order of the Chancellor of the Smithsonian Institution in one year from date, bearing an interest of six per cent. per annum; and that they be further authorized to exchange one hundred and fifty thousand dollars of said notes as soon as practicable for an equal amount of six per cent. stock of the United States, payable in twenty years, which stock shall also be payable to the Chancellor of the institution; which said notes and stock shall be deposited for safe keeping only with the Treasurer of the United States, or such other person as they may deem proper. to be drawn out only upon checks or warrants signed by the Chancellor, the Secretary, and chairman of the Executive Committee.

The said amendment was read; and the question being put, Will the board agree thereto?

It was decided in the affirmative.

Then the said resolution as amended was agreed to by the board.

Mr. Owen offered the following resolutions, which were read, considered, and agreed to:

Resolved, That it is the opinion and intention of the board that, in the appropriation for the objects of the institution of any surplus of accrued interest which may remain after the completion of the buildings of the institution, an equal division shall be made between the two great branches; that is to say, one-half shall be appropriated to the library and museum fund, and the other half to the fund for original research, publications, and lectures; and that, in regard to all other funds hereafter to accrue to the institution, the same division be made.

Resolved, That the building committee be instructed, in the arrangement of the buildings, to extend the gallery of art throughout the western range and western wing; and to arrange two lecture rooms, and no more, in the building. Temporary arrangements shall be made to receive in the west wing of the building the library of the institution until the library proper be completed.

Mr. Seaton offered the following resolutions, which were read:

Resolved, That the building committee invite separate proposals for the principal descriptions of work requisite for the erection of the building, to wit: the masonry, carpentry, plastering, painting and glazing, and enter into contract with different persons for these several branches of work, requiring the proper security from each contractor, so that the responsibility for the erection of the whole building shall not be committed to one person.

Resolved, That the building committee invite proposals for the construction of the exterior walls of the building of upper Potomac sandstone, of marble, of granite, and of blue gneiss, respectively, and adopt that one of these four named materials which shall be deemed to combine the requisites of cheapness, beauty, and durability.

The question was put, Shall the first of the said resolutions pass? and decided in the negative.

The question was then put, Shall the second of the said resolutions pass? and decided in the affirmative.

On motion of Mr. Hough,

The Board of Regents proceeded to the consideration of the second of the resolutions of the committee on the plan of the building, submitted on the 20th instant.

And after debate, the question was put, Shall the resolution pass? and decided in the affirmative.

The board proceeded to the consideration of the third resolution submitted by the said committee; and, after debate, the same was agreed to.

The board adjourned until Saturday, at 10 o'clock.

SATURDAY, January 30, 1847.

Mr. Evans offered the following resolution:

Resolved, That it is expedient that an assistant to the Secretary be appointed, who shall also be the clerk of the building and Executive committees, who shall take charge of the rooms which may be obtained for the use of the institution; who shall assist the Secretary in keeping the records of the regents, keep accounts and papers of the Secretary and of the building committee; who shall be competent to prepare all public advertisements, draw all contracts, keep all accounts of disbursements, and prepare all accounts for settlement at the treasury, and discharge such duties generally connected with the institution as may be required of him by the Secretary or the building committee; and who shall receive such compensation as shall hereafter be fixed upon by the board.

The resolution being read, the further consideration thereof was postponed for the present.

The board adjourned to Friday next, at 10 o'clock.

FRIDAY, February 5, 1847.

Mr. Bache offered, as an amendment of a previous one of Mr. Owen, the following resolution, which was read and agreed to:

Resolved, That the building committee, in conjunction with the Secretary, be authorized to publish, in such form as they may deem most appropriate, one thousand copies of a brief treatise, to be entitled "Hints on Public Architecture," and to be illustrated with designs of the plan of the buildings adopted for the Smithsonian Institution, and, at the option of the committee, with any other designs that are the property of the institution, provided that the cost of the same shall not exceed one thousand dollars, which sum is hereby appropriated for that purpose.

Mr. Owen offered the following resolution, which was read, considered, and agreed to:

Resolved, That the Secretary add to the report of the organization committee, when printed, a copy of the will of the testator, of the act accepting the bequest, and of the act organizing the institution.

On motion of Mr. Evans,

The board proceeded to the consideration of the resolution offered by him on the 30th of January last, to appoint an assistant to the Secretary;

When the said resolution was read and agreed to.

On motion of Mr. Evans,

The board proceeded to the appointment of the "committee of three," in accordance with the fifth section of the act organizing the institution.

Messrs. J. G. Totten, Robert Dale Owen, and William W. Seaton, were appointed the said committee.

On motion of Mr. Hilliard,

Ordered, That Mr. A. D. Bache be appointed temporarily in the place of Mr. J. G. Totten on the Executive Committee, who is now in Mexico.

Ordered, That Mr. Hough be appointed temporarily in the place of J. G. Totten on the building committee.

On motion of Mr. Evans,

Resolved, That in the absence of any member of any one of the committees, the remaining members thereof be authorized to appoint one temporarily in his stead.

On motion of Mr. Evans,
The Board of Regents adjourned *sine die.*

WEDNESDAY, February 17, 1847.

The Board of Regents met at 10 o'clock, a. m., pursuant to the resolution of organization.

Present, Mr. Dallas, (Chancellor,) Mr. Seaton, Mr. Hough, Mr. Owen, Mr. Bache, Mr. Hilliard, Mr. Evans, and Mr. Rush.

The Secretary presented a letter from C C. Jewett, accepting the appointment of Assistant Secretary, to act as librarian; which was read, and laid upon the table.

Mr. Owen offered the following preamble and resolutions, which were read, considered, and agreed to:

Whereas a bill has been introduced into the Senate of the United States, relative to the site of the Smithsonian Institution,

Resolved, That if, in virtue of the provisions of said bill, any change in the present site of the institution be made, all the contracts heretofore authorized by the board in regard to building, laying out the grounds, fencing, &c., shall be and remain in full force, and shall apply to any new site that may be selected, in the same manner as the same now apply to the site in the possession of the institution.

Resolved, That a copy of the foregoing resolution be forthwith communicated by the Secretary of the Smithsonian Institution to the Secretary of the Treasury of the United States.

On motion of Mr. Hough,

Ordered, That the board adjourn until Saturday next, at 10 o'clock, a. m.

Thereupon, the board adjourned.

SATURDAY, February 20, 1847.

The following resolution was adopted:

Resolved, That the sum of two hundred and fifty dollars be paid by the Executive Committee to Mr. Isaiah Rogers, architect, Boston, in full remuneration for plans submitted by him to the board.

On motion, the board adjourned to meet on Wednesday next, the 24th instant, at 10 o'clock, a. m.

WEDNESDAY, February 24, 1847.

The committee appointed on the 5th December last, to "procure the introduction, if they deem it expedient, of a bill amendatory of the act establishing this institution," submit, as the best explanation of their proceedings, the following communication addressed by them to the editor of the "Union," and published in that paper of the 15th February:

TO THE EDITORS.

Sir: The undersigned, appointed by the Board of Regents of the Smithsonian Institution a committee to "procure the introduction into Congress, if they deem it expedient, of a bill amendatory of the act organizing the institution," have, in discharging the duty assigned them, had brought under their consideration the subject treated of in an editorial published in the Union of February 11. And they beg leave to offer, in reply, a few remarks and a brief statement of their intentions in the premises.

The building committee of the Smithsonian Institution have already exonerated the board from all responsibility connected with the selection of a site on the Mall in preference to one in the populous portion of the city; no choice being in fact left to the board, since no suitable unoccupied square is to be found on the entire plan of the city this side of the canal; and, with no other powers than those contained in the act organizing the institution, no site already occupied could be purchased by the institution.

There is a site the most eligible, probably, in the city, for our institution—that of the present City Hall. It has been represented to the undersigned that it would be most desirable, on the score of public convenience, if it could be procured. They concur in this opinion. In the immediate vicinity of the principal hotels and boarding houses, comprising an eminence whence the ground gradually falls off in all directions, in a healthy portion of the city, utility and appearance would be equally consulted in selecting it. But it is in the occupation of the city, and, while the present building remains upon it, it can properly receive no other public edifice. Without the concurrent action of Congress and of the City Corporation it cannot be obtained as a site for the Smithsonian Institution.

The undersigned, however, having had their attention called to this subject not only by the article to which they are replying, but by other similar representations, after maturely considering the subject, have resolved to endeavor to obtain such concurrent action. They examined the plan of the present City Hall, the same of which a model now stands in the corridor of that hall, and of which the building now erected is but a small part; and that, too, unfinished, inconvenient, and unsightly. They ascertained that this fraction of the plan, bald and gloomy as it is, adapted to receive expensive porticoes and steps on three of its sides, (no portions of which, during the quarter of a century it has stood, have been attempted,) has cost ninety thousand dollars; and they found the estimate for its completion to be three hundred and ten thousand dollars more. That it will ever be completed, no one believes. Congress will not, and the city cannot, furnish the means. To give even to the fraction that now stands a decent or reputable finish, would cost fifty or sixty thousand dollars; and though its present dilapidated condition—most discreditable both to the city and the government—may seem loudly to demand some action, yet it is doubtful whether Congress will ever expend that amount on so unpromising and expensive an object.

Nor is the present shell, great as has been its cost, profitable any more than ornamental. It brings little or no revenue to the city. In view of these circumstances, the undersigned came to the conclusion that a sum, say of fifty thousand dollars, would probably be a sufficient inducement to the city authorities to abandon a building they can never hope to complete, and which, unfinished as it stands, is an eyesore and a reproach; inasmuch as with that sum they could put up, on the Centre Market space, a plain building sufficient to afford, in its upper story, the accommodations required as well by the United States circuit court and its officers, as by the city authorities, while its lower story might furnish market stalls and stores that would rent for many thousand dollars annually.

The undersigned were also of opinion that, considering the advantages of the City Hall site to the Smithsonian Institution, so far as regards its usefulness in connexion with its library, its collections, and its lectures, the institution might properly and prudently give for the materials of the City Hall their full value—say fifteen thousand dollars.

If these views be correct, the only remaining difficulty regards the thirty-five thousand dollars necessary to make up to the city the full sum of fifty thousand dollars. And this sum the undersigned believe it to be just and expedient that Congress should appropriate, provided the corporation will bind itself to furnish in their new building sufficient accommodation for the United States circuit court, its officers and records; just, because the general government has already, for the sum of ten thousand dollars only, (which it paid to the city twenty-five years ago,) had the use of nearly half the City Hall for its courts throughout all that term of years, and therefore ought now to furnish further means to procure the accommodation necessary for that purpose; and expedient, because the present City Hall, which cannot, for very shame, be left without some repair or finish much longer, will, from the necessity of the case, while it stands, remain a permanent ground of claim on the government; and because any repairs worth making on it at all would exceed the sum here proposed to be appropriated. The cheapest thing that can be done with the City Hall, both as regards the city and the government, is, the undersigned believe, to get rid of it. And if on its site a building arise, reputable even, to say nothing of architectural beauty, and commenced with funds and upon a scale that insures its speedy completion, it should count for something, if only on the score of appearance and national reputation, that a gloomy and meaningless and slovenly pile has been replaced by an object that will strike pleasantly on the eye of the traveller as he approaches this metropolis.

Governed by considerations such as these, the undersigned, in view of the fact that whatever is done in this matter must be done at this session of Congress, have decided, in discharge of the duty assigned them by the board, to introduce into Congress without delay a bill of which the following is a copy:

AN ACT to authorize the Regents of the Smithsonian Institution to purchase, for the use of said institution, of the corporation of the city of Washington, the City Hall, and for other purposes.

Be it enacted, &c., That the Regents of the Smithsonian Institution be, and they are hereby, authorized to purchase of the corporation of the city of Washington all the right, title, and interest of the said corporation in and to the City Hall of the said city; subject, however, to the conditions and provisions hereinafter specified: *Provided*, That the corporation shall, on or before the tenth day of March next, enter into bond, with sufficient sureties, to be approved by the Attorney General of the United States, that they will erect on the Market Space, between 7th and 9th streets west, and between Pennsylvania avenue and B street north, a suitable and commodious building, in which there shall be included such apartments as may be necessary for the accommodation of the circuit court of the United States for the county of Washington, in the District of Columbia, for the use of the grand and petit jurors of the said county, for the offices of the clerk of the said court and the marshal of said District, and for the preservation and security of the books, papers, and records of the said court; and that they will complete the said building, or so much of the same as may contain the apartments and accommodations aforesaid, and shall prepare the same for the said courts and offices, on or before the tenth day of March, 1848. And, upon such purchase being completed, the said corporation shall release and forever quit claim unto the said Smithsonian Institution all the right and title of the said corporation unto the said City Hall, and unto the possession and occupation of the lot or square on which the same now stands.

Sec. 2. *And be it further enacted*, That so soon as the said bond and release shall be executed by the said corporation, and sufficient evidence thereof be laid before the President of the United States, the President be, and he is hereby, authorized to grant unto the said corporation the right to occupy and improve, for public purposes, all or any portion of that lot or square of ground in the city of Washington, including the Market Space, lying between Seventh and Ninth streets west, and bounded on the north by the south line of Pennsylvania avenue, and on the south by the north line of B street north. And then, and in that case, there shall also be paid to the corporation, towards the erection of the building, as provided in the first section of this act, the sum of thirty-five thousand dollars, which sum is hereby appropriated out of any money in the treasury not otherwise appropriated; and the said sum of thirty-five thousand dollars is hereby declared to be in full of the apartments and accommodations specified in the first section of this act; and the said apartments and accommodations shall forever remain subject to the occupation of the courts and their offices aforesaid.

Sec. 3. *And be it further enacted*, That in case of the execution, by the said corporation, of the bond and release aforesaid, the regents of the Smithsonian Institution be, and they are hereby authorized, by resolution of the Board of Regents, to retrocede to the United States that certain building site in the city of Washington, and in the public reservation commonly called the Mall, which, according to the provisions of the act organizing said institution, approved August 10, 1846, has become the property of the said institution; and, upon proper evidence being adduced, to the satisfaction of the President of the United States, of said retrocession, the President shall be, and he is hereby, authorized to convey to the Smithsonian Institution, by metes and bounds, so much of that public reservation in the city of Washington, commonly called the Judiciary Square, as lies south of the extension of the south line of E street north, being the same lot or square on which the City Hall now stands; and the said conveyance by the President shall be received in evidence in all courts of the extent and boundaries of the lot or square of land which, by virtue of this act, may become the property of the said Smithsonian Institution.

Sec. 4. *And be it further enacted*, That the Commissioner of Public Buildings in the city of Washington be, and he is hereby, authorized and required to provide temporary accommodations in some suitable building for the circuit court of the United States for the county of Washington, and for its offices and records, until the tenth day of March, 1848. And for the purpose of procuring said accommodations, the sum of one thousand dollars, or so much of the same as may be required for that object, be, and the same is hereby, appropriated out of any money in the treasury not otherwise appropriated.

It will be observed that this bill leaves the matter wholly at the discretion, first, of the corporation, and, secondly, of the Board of Regents. Unless both concur to accept its provisions, it will be inoperative. The undersigned do not know that either will accept them; but that they will, and that they ought to do so, they have given their reasons for believing.

GEO. EVANS,
WM. J. HOUGH,
ROBT. DALE OWEN,
} *Committee.*

WASHINGTON, *February* 13, 1847.

Since the publication of the above, and the introduction into the Senate by one of your committee of the bill referred to, the common council of Washington, during their session of February 22, passed, by a vote of 17 to 3, a resolution to the effect "that it is the deliberate opinion of the two boards that the proposed change would not comport with the interests of the city."

This vote, your committee think, shuts out all prospect of carrying out the plan contemplated in the proposed bill; and for that reason, though after reflection has but confirmed the conviction of the propriety and utility of that plan, they have abandoned it, and have ceased to urge through Congress the passage of the bill in question.

All which is respectfully submitted.

GEO. EVANS.
WM. J. HOUGH.
ROBT. DALE OWEN.

The following resolution was offered by Mr. Seaton, and agreed to by the board:

Resolved, That the Executive Committee be authorized to procure a suitable seal for the institution, to comprehend the medallion head of Smithson, surrounded by the words "Smithsonian Institution."

The board adjourned, to meet on Saturday next, at 10 o'clock, a. m.

SATURDAY, February 27, 1847.

On motion of Mr. Owen,

Resolved, That the Secretary be authorized to cause to be instituted a series of experiments to determine the economical value of the different building materials used in the United States.

Adjourned until Monday, at 10 o'clock.

MONDAY, March 1, 1847.

Mr. Preston appeared, and took his seat in the board.

Mr. Owen offered the following resolution, which was adopted:

Resolved, That the sum of five hundred dollars, or so much of the same as may be necessary, be, and the same is hereby, appropriated towards the expenses of the experiments heretofore authorized to be instituted to determine the economical value of the different building materials used in the United States.

Mr. Hough offered the following resolution, of which he gave notice at the last meeting:

Resolved, That it being understood Mr. George Catlin is about to return to this country with his collection of Indian paintings, &c., he be requested to deposite the same in one of the galleries of the Smithsonian Institution, as soon as the building shall be ready for its reception, provided he will do so without charge to the institution; and that upon such deposite being made, said institution will properly arrange and prepare said collection for exhibition.

The motion was agreed to.

Mr. Hough also proposed the following, which was adopted:

Resolved, That the Secretary inform Mr. Catlin of the adoption of the above resolution, and of the probable time the building will be ready for the reception of the collection.

The Board of Regents then adjourned *sine die.*

The Board of Regents have drawn from the treasury, for the current expenses of the institution, the sum of - -		$7,584 07
The disbursements from this fund have been as follows:		
Expenses of regents in attending meetings of the board - - - - - -	$2,525 10	
For materials and erection of specimen walls, and superintendence thereof - - -	343 53	
For compensation to architects for designs, &c. -	1,025 00	
For books purchased - - - -	479 49	
For services of assistant secretary - -	200 00	
For recording journal and documents, and sundry incidental expenses - - - -	193 25	
For services of messenger - - -	73 50	
Postage - - - - - -	5 03	
		4,844 90
Leaving a balance in hand of - -		2,739 17

WASHINGTON, *March* 1, 1847.

30th Congress,
1st *Session.*

[SENATE.]

Miscellaneous.
No. 23.

REPORT

OF THE

BOARD OF REGENTS OF THE SMITHSONIAN INSTITUTION,

SHOWING

The operations, expenditures, and condition of the Institution.

January 6, 1848.
Ordered to be printed.

To the Senate and House of Representatives of the United States:

In obedience to the act of Congress "to establish the Smithsonian Institution, for the increase and diffusion of knowledge among men," the Board of Regents herewith submit to Congress a report of the operations, expenditures, and condition of the institution, with sundry accompanying documents.

These documents embrace a complete record as well of the operations of the institution since the date of the last annual report to Congress, as of its expenditures, and of its present condition.

They are as follows:

No. 1. Report of the building committee to the Board of Regents, accompanied by a copy of their journal from the date of the appointment of the committee to the 1st December, 1847.

No. 2. Copy of the journal of the building committee, referred to in the foregoing.

No. 3. Report of the Executive Committee, containing a statement of the expenditures of the institution from the organization of the institution to the 1st December, 1847.

No. 4. Proceedings of the Board of Regents, from the date of the last annual report to the 22d of December, 1847.

No. 5. Report of the Executive Committee to the Board of Regents, dated December 15, 1847, embodying a statement of the present condition of the funds of the institution, and the proposed scale of annual expenditure until the completion of the building.

No. 6. Report of the Secretary of the institution to the Board of Regents, containing a programme of organization of the Smithsonian Institution, presented to the board December 8, 1847.

Document No. 1 will be found to contain a condensed statement of the proceedings of the building committee, compiled from their journal; by which it will be seen, that in the discharge of their duty they had occasion to collect, and record, a variety of information of practical value, especially on the subject of building-materials. The result, in their own case, has been, that they have obtained for the institution building a free-

Tippin & Streeper, printers.

stone superior, both in durability and appearance, to any heretofore used in the public buildings of this city, yet costing less than one-half as much as that employed in the erection of the Capitol, Executive mansion, Treasury building, and Patent Office. Attention is respectfully invited to these results, as they can hardly fail to be important to the public service if the general government, at any time hereafter, should add to the number of its buildings in this metropolis.

Document No. 2 gives in minute detail the results above referred to. It contains reports from an experienced geologist, on the marble and granite quarries of Maryland; on the Aquia creek quarries, which have hitherto furnished the material for the principal structures in this city; and on the freestone quarries of the upper Potomac, in the vicinity of Seneca creek, whence has been drawn the lilac-gray freestone employed by the committee, for the institution building. It contains also a report, by a chemist of this city, of the results of certain experiments which the committee caused to be instituted, to determine the durability of various building materials when exposed to the action of the weather.

This document contains, further, a copy of the contract made for the erection of the institution building, together with the specifications of the same. It will be perceived that the contract was taken at a rate less, by about thirty-seven thousand dollars, than the amount set apart by the board, for the erection of the building.

In this document will also be found several other contracts made by the committee; among them, one with Messrs. Wiley & Putnam, publishers of New York, for the publication of a brief treatise on public architecture, to be illustrated with plans and designs of the institution building, and to contain the result of a series of experiments which have been set on foot by the institution, to determine the economical value of the principal building materials throughout the United States.

It also contains an address by the Chancellor of the institution, delivered on occasion of laying the corner stone of the building; and embracing a succinct view of the objects and the general proceedings of the institution, together with some details touching the style and dimensions of the building, then about to be commenced.

Document No. 3 gives a table of the expenditures of the institution, under the various heads, since its commencement. The entire expenditure is $37,670; of which about two-thirds were spent for the building and incidentals therewith connected, and one-third for other objects: among the latter, upwards of two thousand dollars for books and philosophical apparatus; about two thousand dollars for salaries of officers; thirteen hundred for premiums for designs for the institution building; and $3,876 for expenses of the board and its committees. This last item has been considerably swelled in consequence of the provision, in the act organizing the institution, that its first meeting should be in September, when Congress was not in session, and when, consequently, the travelling and other expenses of all its members, fifteen in number, and some residing at a great distance, had to be paid; those of two members only excepted, who were residents of the city. To prevent the recurrence of such expense, the board, as will be seen by reference to its journal, has arranged its regular meetings to take place during the session of Congress, restricting them to one only each year; and as at that time all the members of the board, except four, become residents of the city, incurring no additional expense by attending to their duty as Regents, and therefore charging to the institution no expenses, the annual expense of the board will hereafter be very small compared to what it has been: it cannot reasonably be estimated beyond eight hundred or one thousand dollars annually.

This item of expenditure has also been increased by the necessary expenses of a committee appointed to visit and report upon public structures in the principal cities of the Union, and to confer with architects, with a view to the selection of convenient plans, based upon the act of Congress, and of a suitable style of architecture. It is believed, that when the institution building shall be completed, Congress and the public will be satisfied with the result of these labors.

Some expense will annually be incurred by the building committee, until the completion of their task. But, as two of the members of the committee are residents of Washington, that expense will not be large; and will, it is believed, be repaid by the amount of information collected and recorded by them, and by the volume now preparing for publication.

Document No. 4 is a record of all the important proceedings of the Board of Regents, extracted from their journal, and continued from the close of their proceedings, as given in the last report of the board to Congress, down to the end of their last meeting. There will be found, among other resolutions passed by the board, one making appropriations for the current expenses of the institution throughout the coming year; also, the action of the board upon the series of resolutions establishing a scale of expenditure for the next four years.

Document No. 5 is the report of the Executive Committee, in which is proposed to the board a plan of financial operations, and scale of expenditure, for four years from and after the 19th of March next—that is, during the last four years of the building contract; according to which plan, the sum of fifteen thousand dollars may annually, throughout that term, be appropriated for the current expenses of the institution; and the building may be completed and furnished, and the grounds laid out and fenced, without withdrawing from the amount of so-called accumulated interest—to wit: $242,129, specially made applicable by Congress to the building—more than $102,000, and thus leaving $140,000 of that sum to be added to the original principal or bequest, as a permanent investment.

Document No. 6 is the first report of the Secretary of the institution. The programme of the organization, given therein, embraces as well the general considerations which have served as a guide in adopting that organization, as the details both of the plan to *increase* and of the plan to *diffuse* knowledge. The report of the Secretary elucidates and explains the programme, and also contains a statement of the progress made in the preparation of the first volume of the Transactions of the institution; in the purchase of apparatus, the preparation for original researches, with suggestions as to the operations of the next year, &c., &c.

The board respectfully express the hope that Congress will cause to be published, along with this report, these several documents.

All which is respectfully submitted.

G. M. DALLAS,
Chancellor of the Smithsonian Institution.
JOSEPH HENRY,
Secretary.

DECEMBER 31, 1847.

No. 1.

Report of the Building Committee of the Smithsonian Institution.

The committee submit to the board, as a complete record of their proceedings from the date of their appointment, on the 5th of February last, to the 1st of December current, a copy of their journal.

By reference to that journal, the board will perceive that the committee, in discharge of their duty, were led into a somewhat extended field of inquiry, especially as regards building material; and that they have been enabled to collect, and have duly recorded, a large amount of detailed information on this subject essential to their own guidance, but also, they believe, important to the public generally, and especially to the government, if Congress should decide to erect any other public buildings in this city. They caused to be examined the various marble, and granite, and freestone quarries within a moderate distance of Washington, having been fortunate enough to engage the services of a gentleman of practical experience as a geologist, and who tendered these services gratuitously, his necessary travelling and other expenses only being paid.

The examination embraced the chief marble and granite quarries of Maryland; the freestone quarries of Aquia creek, Virginia, whence the material has been drawn for the construction of the Capitol, President's house, Treasury building, and other public structures in this city; and the freestone quarries of the upper Potomac, chiefly in the vicinity of Seneca creek, on the banks of the Chesapeake and Ohio canal, and about twenty-three miles from the city.

The results of this examination, as contained in reports made by the geologist, and which will be found spread at large on our journal, were briefly these:

1st. That the marble quarries of Maryland, chiefly in the vicinity of the village of Clarksville, about thirteen miles from Baltimore, on the line of the Susquehanna railroad, contain two qualities of marble: one fine grained and of beautiful uniform color, approaching the character of statuary marble; the other, of inferior quality, similar to the Sing Sing marble employed in New York, in Grace church and other public structures, of a somewhat coarse and highly crystalline structure, and known to the quarrymen here under the name of "alum limestone." The former was confidently recommended as a building material equal in durability to any in the world; the latter was pronounced inferior, both in beauty and durability, yet capable of furnishing a very lasting material if the selection was made with care. Being less tough than the finer-grained variety, it was thought less suitable for ornaments having bold projections, and somewhat liable to chip off where there was much undercutting.

2d. That the granite quarries of Maryland, in the vicinity of Woodstock, on the line of the Baltimore and Ohio railroad, and about sixteen miles beyond the Relay House, furnish a granite equal to that of Quincy, and not excelled for beauty of appearance, compactness of structure and uniformity of color, texture, and composition, by any granite in the United States; splitting, also, with remarkable facility, so that on a block twelve or fourteen feet in length the face of cleavage may not vary more than a single inch from a true level; in short, a building material of unsurpassed durability and uniformity, and to which, as to the finer grained marble in the Clarkesville quarries, no possible objection, except on the score of expense, could be found, unless, indeed, it be considered one, that in this material the effect of light and shade from projecting surfaces is in a measure lost, while in marble and good tinted freestone every shadow is sharply marked.

3d. That the Aquia creek freestone, heretofore used in public buildings in Washington, is a material not to be trusted to, being pervaded by dark specks of the protoxide and peroxide of iron, which in peroxidating acquire a yellowish or reddish color, and having occasional clay holes, such as disfigure the Treasury and the Patent Office. A portion of this freestone was, indeed, considered durable and free from material blemish; but the chance of actually procuring it free from disfiguring spots and stains was considered so uncertain, that it was recommended to refrain from using it in the institution building.

4th. That the freestone of the upper Potomac, in the vicinity of Seneca creek, and found in quarries close to the line of the Chesapeake and Ohio canal, is the best and most durable of all the Potomac freestones.

The lilac-gray variety found in the Bull Run quarry, twenty-three miles from Washington, was especially recommended, and pronounced to be equal, if not superior, to that supplied for Trinity church, New York, from the quarries of New Jersey.

In regard to this latter material, it was stated that it possessed a quality that should especially recommend it to the attention of builders. When first quarried it is comparatively soft, working freely before the chisel and hammer; but by exposure it gradually indurates, and ultimately acquires a toughness and consistency that not only enables it to resist atmospheric vicissitudes, but even the most severe mechanical wear and tear. Thus, on the tow-path of the aqueduct, near Seneca creek, over which horses and mules have been travelling almost daily for upwards of twenty years, this freestone was found still unimpaired. Even the corners around which the heavy lock gates swing, showed no signs of chipping or decay; and on the perpendicular wall of the aqueduct, where the water is continually oozing through the joints and trickling down its face, forming an incrustation of carbonate of lime, this freestone was observed, where the calcareous crust had scaled off, with the grooves and ridges of the surface still nearly as distinct as when the blocks first came from the hands of the stone-mason, more than twenty years ago.

The rare and valuable quality possessed by this freestone, of hardening by exposure to the weather, and which may be due to iron in its composition, passing from a lower to a higher degree of oxidation, is occasionally found in building-stone on the continent of Europe; as, for example, in a calcareous freestone which has been excavated for centuries from St. Peter's mountain, near Maestrich, in Belgium. It is highly prized wherever found, as this peculiarity permits the freestone to be wrought at considerably less expense than either granite or marble, and imparts to it a durability increasing with age.

Further to test the durability of these various building materials under exposure to the vicissitudes of the seasons, specimens of each, and also of other building-stones from New York and elsewhere, were handed to a gentleman of this city experienced in chemistry, and having a laboratory at command, and he was requested to subject these to a process recommended by Brard, a French chemist, and described in the "Annales de Chimie et Physique;" according to which, the crystallization of the sulphate of soda is substituted for the freezing of water; and thus, by artificial means, the action of the elements on these materials—the alternate freezing and thawing to which the external component of a building is in this climate annually subjected—is in a measure imitated. The result—which, however, in consequence of the short time which could be allowed for the process, must be considered an approximation only to the truth—is given in a report from the gentleman in question. The specimens were reduced to inch cubes; and it was found, after four weeks, that a cube of granite had lost about *one third of a grain;* a cube of the fine grained marble about *one-fifth of a grain;* a cube of the best quality of the "alum-stone," or coarser-grained marble, *half a grain to a grain and a half;* and a cube of freestone from the Patent Office, which, however, was judged not to be a fair average specimen of the Aquia creek freestones, lost *eighteen grains and a half.* Freestone from Trinity church lost from *two thirds of a grain* to about *a grain and a half.* The brown Connecticut stone, freely used in New York, lost from *fourteen* to nearly *twenty five* grains. Coarse grained New York marble, from Mount Pleasant, lost *nearly a grain;* Nova Scotia coarse-grained sandstone about *two grains;* while Pennsylvania blue limestone lost little over *a quarter of a grain.*

As to the relative cost of the Maryland granite, Maryland marble, fine-grained and coarse-grained, Aquia creek freestone and Seneca creek freestone, it was found, from the report of the geologist and from actual offers made to the committee by owners of quarries, and which will be found recorded in the journal of the committee, to be, per cubic foot of dimension stone delivered in Washington, as follows:

1st. For coarse grained marble with large crystals, commonly called "alum-stone," from *fifty* to *sixty cents*, according to quality.

2d. For fine-grained marble, the lowest offer was *seventy* cents.

3d. For granite, *forty six* cents.

4th. For Aquia creek freestone, *forty* cents. The material used in the public buildings in Washington, in blocks of ordinary size, has cost from *forty* to *fifty* cents.

5th. For Seneca freestone, the lilac-gray variety, from Bull Run quarry, *twenty* cents. A contract has been made by a gentleman of Washington, not connected with the institution, to have stone from the Seneca creek quarries delivered to him in the city at that price.

East Chester marble was offered at *seventy-five* cents.

The committee ought here to state, that the proposals by owners of granite and marble quarries in Maryland to deliver material for our building were at a considerable lower rate than they otherwise would have been, in consequence of the liberality evinced by the directors of the Baltimore and Ohio railroad, and of the Baltimore and Susquehanna railroad, towards the institution. The chairman of the committee had an interview with Mr. McLane and Mr. Howard, the presidents of these railroads, and the directors of both companies passed resolutions, that if we decided to use Maryland marble or granite, they would transport it at the rate of *two and a half* cents per ton per mile, instead of *four* cents, the usual charge for the transportation of similar materials. As it happened, the committee had no occasion to avail themselves of this liberal proposal; but it doubtless materially influenced the amount of the bids subsequently put in for the erection of the building in marble and granite.

Such is a brief summary of the measures adopted by the committee, and of the information collected by them, and which will be found in detail on their journal, on the important subject of building material. While engaged in collecting that information, they caused to be inserted in the city journals, advertisements inviting from contractors proposals for the erection of the institution building; the external walls to be of upper Potomac freestone, or of marble, or of granite, or of blue gneiss; and separate proposals were requested in each of these materials. Meanwhile the architect and superintendent attended in the office of the institution with specifications, ready to give the necessary information to all applicants.

The day originally set as the last on which bids would be received, was the 10th of March; but as the specifications were delayed by the printers several days beyond the time appointed by the public advertisement for the inspection of bidders, the committee extended the time for receiving bids to the 15th March.

On the 16th of March the bids were opened, in presence of the building committee and of the architect and superintendent. A number of these were found to be proposals to deliver materials only, or to execute a small portion of the work, as the brick work, alone; the stone cutting at so much per foot, &c. These are spread on the journal of the committee, and will be found to contain much valuable information as to prices.

The bids to erect the building were found to be fourteen in number, and to vary in amount from $196,000 to $318,000—the lowest being that of James Dixon & Co., of Washington, and the estimate being for Seneca freestone, laid up in rubble masonry. The bids by the same firm, as given in the explanatory correspondence of the same date, and in a personal communication on the 18th March, for *ashlar* finish, were also the lowest put in, namely:

For marble ashlar - - - - - -	$228,500
And for Seneca freestone ashlar - - - -	205,250

After a careful examination of the subject, the committee decided, that to the particular design as adopted by the board, with its numerous vertical lines often closely approaching each other, the finish of the regularly coursed ashlar was the best suited, and would make a more substantial job than broken rubble.

They concluded also, that, with a complete conviction on their minds of the durability of the Seneca freestone, and with a doubt whether it did not assort even better with the Lombard style of architecture adopted than marble, it was inexpedient to expend twenty-three thousand dollars additional to obtain the latter material. They informed James Dixon & Co., therefore, that their bid of $205,250 for the erection of the building in Seneca stone, finished in coarse ashlar, was accepted.

The result, your committee think, has proved that their selection of material was a judicious one.

On inquiry, the committee found that the firm of James Dixon & Co. consisted of James Dixon, of Washington, and Gilbert Cameron, of New York. The latter gentleman executed a portion of the work on Trinity church, and was a contractor on Calvary church, New York.

A contract was signed by the committee and by Messrs. Dixon and Cameron on the 19th of March. It will be found, accompanied by the specifications, which make part of the same, on the journal of the committee. It includes a portion but not the whole of the furniture; the portion included, however, being the most expensive part of it, and comprehending the shelving cases, desks, drawers, and tables, in the laboratory and apparatus room; the book-cases, large tables and alcove desks, in the library; the glass cases in the museum; the seats in the lecture rooms; the elevators, with sheaves and counter-weights; water closets, completely fitted up; rain-water cisterns; and the chairs and table in the Regents' room. Flues for heating and ventilation are provided for, but the expense of heating and lighting is not included. Cess-pools are included, but no provisions for draining, according to the municipal regulations of the city.

The foundation walls, under the main central towers, are twelve feet thick at bottom, gradually diminishing to five and a half feet at the surface of the ground, and are sunk eight feet deep. The foundations of the rear central tower, excavated to the same depth, are ten feet, diminishing to five feet; of the campanile and octagonal towers also ten feet, diminishing to five and six feet deep. The thickness of the walls of the main building, above the water-table, is two feet and a half in the first story, and two feet in the second, exclusive of buttresses, corbel-courses, and other similar external projections, and exclusive, also, of an internal lining wall of brick, of the thickness of a single brick, tied at intervals to the wall, and intended to plaster to. The walls of the wings are two feet thick. The central towers are three feet and a half thick in the first story, diminishing to two feet in the highest story.

Inverted arches, of hard brick, are turned under all the openings of the foundation. Groined arches are turned under the central towers, the campanile, the octagonal tower, and the tower of the west wing.

The ashlar facing of the building is to be laid in courses from ten to fifteen inches in height, with a bed of nine inches, and the joints to be nowhere over three-eighths of an inch.

The basements, to contain the heating furnaces, also the janitors' rooms and the room to receive Smithson's personal effects, are fire-proofed. A pine floor, covered two inches thick with cement, is carried under the roofs of the whole building. The floors, where they are not fire-proofed, have a deafening of lime, clay, and sand.

The central stair-cases, front and rear, are to be of stone to the museum floor. The floor of the gallery of art, embracing the west wing and its connecting range, of the laboratory, including the east wing and part of its connecting range, of the central hall and the vestibules, also the floors of the basement under the laboratory, under the central towers, under the campanile and other towers, together with the cloisters, are to be flagged with North river flagging. The floor of the principal lecture-room will also be flagged with flags, supported on brick cross-walls. The floors of the library and museum are to be of pine; and it is not proposed that either of these two rooms should be artificially lighted.

The laboratory wing is to be roofed with slate—the rest of the building, as the contract now stands, with sheet tin; but the committee propose to roof the main building and west wing with slate, paying the difference.

It was made a condition of the contract that the erection of the building should occupy a period of five years from its date, that term ending on the 19th of March, 1852. It was also agreed that the building should be erected in such proportions, during each year, as the committee might direct, but so that the payments to the contractor in each of the first four years of the contract should not exceed an annual amount of $41,000; and so that the wings and connecting ranges should be completed in two years from the date of the contract. Fifteen per cent. on the architect's estimates is kept back until the completion of the building; but interest is to be ultimately paid on this per-centage, calculated from the dates of the several estimates.

On the suggestion of one of the Regents, not a member of the committee, and of the Secretary of the institution, a supplement was appended to the contract, by which it was stipulated, that if the Board of Regents should hereafter determine to make important alterations in the plan of building, or in the time of its execution, then the contractor was to be paid pro rata, according to the prices in the contract, for work executed, and reasonable damages, if the nature of the case should justly demand it. In case of dispute as to the amount, the matter to be referred to the architect of the institution, or any other architect selected by the committee.

The contractors gave as security for the faithful performance of the contract, W. H. Winter, of Washington, and Horace Butler, of New York. The security was approved by the committee; and a bond, with a penalty of fifty-two thousand dollars (being one-fourth of the amount of the entire contract) was executed accordingly.

The corner-stone of the building was laid on the 1st of May. The details of the ceremonies upon that occasion, including the address delivered, in accordance with an invitation from the committee, by the Chancellor, and which ceremonies were witnessed by six or seven thousand persons, will be found at large on the journal of the committee.

The contractors proceeded for some time with the work in partnership; but on the 1st of June Mr. Dixon informed the board that the work would thereafter be conducted by Mr. Cameron alone; and since that time, it has been entirely managed by that gentleman.

Mr. Cameron has since proceeded in the work with spirit, and has executed it, upon the whole, in a manner satisfactory to the committee. Occasional departures from the letter of the contract have been pointed out to him, and he has promptly remedied whatever was complained of. He is now covering in the east connecting range, and hopes still to cover in the east wing, also, before he shall be arrested by frost; though he has been very much retarded in his operations, and has suffered some pecuniary loss by the breakage in the canal, caused by the late freshets. Since the 7th of October, when the first damage was done, until now, the canal has been closed, and not a perch of stone has been received. In another week or fortnight there is a fair prospect that the damage may be repaired, and water let into the canal. But for this accident, the contractor would already have covered in the east wing of the building. He has now some twelve or fifteen thousand feet of stone lying ready quarried, and awaiting the re-opening of the canal.

The chairman of the committee recently visited the quarry and found the stone that had been quarried of excellent quality and color, the tint somewhat lighter than the average tint of the present building. It quarries with remarkable facility, and the supply is unlimited.

The contrctor has commenced to lay the foundations of the west wing and west connecting range, but nothing whatever has yet been done towards the erection of the main building.

The style of achitecture selected by the board seems to meet with general approval. It may be taken as one evidence of this, that a church now in progress of erection in Stuyvesant square, New York, and of which the cost will reach some hundred and fifty thousand dollars, is built in the same style; as, by a perspective view of the same herewith submitted, the board will perceive.

The lot belonging to the institution has been fenced in with a paling fence, whitewashed, which will last at least until the termination of the contract for the building. No measures have yet been taken for the erection of a permanent fence.

Water has been conveyed to the site of the building by tapping the fire plug at the engine house in Market square. The pipe is a strong leaden one, of inch-bore, laid two feet below the ground, and the water is conveyed across the canal in an iron pipe of two-inch bore.

The contract for the fence was taken by Joel Downer, and that to convey the water by Caleb Buckingham, both of Washington. A copy of their respective contracts will be found on the journal. After completing the work in a satisfactory manner, both of these gentlemen applied to the committee for extra compensation. Mr. Downer stated that the fence erected by him cost much more than the amount at which he contracted to complete it, and which was paid to him; and at one time during its progress—to wit, on the 22d of May—he offered to relinquish to the committee all he had done, if they would release him from the contract. This, however, they declined to do.

Mr. Buckingham handed in a bill of his expenses, showing a larger amount expended than that which, in accordance with the terms of his contract, was paid to him, and alleged that he had laid down a heavier pipe than by the contract he was required to do. On these grounds, he put in a claim for additional compensation. The committee declined to allow it, but informed Mr. Buckingham that the matter would be by them referred to the Board of Regents.

The board will find the particulars of this case, and of that of Mr. Downer, in the minutes of their thirty fourth meeting; and the committee beg to refer both cases to the board, for their decision as to whether in either case relief ought to be granted.

The total amount expended on the building and on the fencing of the lot up to this date, the 1st December, including superintendence and all incidental expenses therewith connected, is $25,002 67, namely:

Paid to Cameron, contractor - - - - - -	$20,840 00
Buckingham, supplying water to building - - -	650 00
Downer, for fence, $400; additional rail subsequently added, $60; whitewashing the same, $60 - - - - -	520 00
For architect's office - - - - - - -	200 00
Coal bin - - - - - - - - -	10 00
Corner-stone - - - - - - - - -	9 00
Superintendence, including incidentals therewith connected, and allowance to architect for original plans - -	2,773 67
Total to 1st December, 1847 - -	$25,002 67

The committee has made a careful estimate of the probable expenditure for the building and lot, all incidentals included, from the 1st December, 1847, to the 19th March, 1848, being the end of the first year of the building contract, and set it down at $10,467 50, thus:

Payments to contractor, about - - - - - - -	$9,500 00
Superintendence and contigencies, about - - - - -	967 50
Total from 1st December, 1847, to 19th March, 1848, about	$10,467 50

These two sums added together will give the total amount expended and to be expended for the above objects, from the commencement of operations to the end of one year from the date of the contract, about $35,470 17.

It will be observed that the amount paid and to be paid to the contractor within that year, will be less than thirty-one thousand dollars; that is, upwards of ten thousand dollars less than the annual payments to which, by the contract, the contractor is restricted.

The item of superintendence, with its incidentals, is a considerable one. It is larger this first year than it will be in any subsequent one: first, because of an allowance of about two months' salary to the architect, not in payment of his design, but to repay the actual expenses incurred during these two months and previously, in the mechanical execution of plans and sections of the building, including those which embodied the modifications of the original design suggested by the committee appointed on the 9th September, 1846, and subsequently adopted by the board; and, secondly, because it was necessary to engage the services of the architect and superintendent about a month before the actual signature of the contract.

The annual expense of superintendence is necessarily increased by the circumstance that the architect does not reside in Washington. The committee could not afford to offer him a salary which might have induced him to abandon his New York business; and as in consequence he could be present during a portion of his time only in this city, the alternative was presented to them either to leave the work, during his absence, under the control of the contractor, trusting wholly to his judgment and to his scrupulous observance of the contract, or to engage the services of a superintendent who might be always on the spot, to see that no faulty materials nor insufficient work was admitted into any portion of the structure. They considered this latter the more prudent course, and engaged as superintendent a gentleman of much experience as an architect and builder, at a salary of $1,000 a year. To the principal architect they gave eighteen hundred a year and his travelling expenses—which, as he usually passes between New York and Washington once a month, amount to about three hundred a year—together with actual expenses for stationery, being from fifty to a hundred dollars annually.

In connexion with this item of superintendence, the committee remark, that the labor and expense of preparing working plans in a style so novel as the Lombard, and for a design so irregular as that which has been adopted, are very much greater than if the style were one common in this country, or the design characterized by greater regularity.

The expenses necessarily incurred by the building committee—which, however, are small, as one member only of that committee is a non-resident of Washington—are not included as part of the expense of the building; both because a considerable portion of their attention was directed to objects other than the building, hereafter to be mentioned, and with which they were charged by the board, and also because they consider the information embodied in their journal, herewith submitted and in this report, to be more than an equivalent, in its value to the public, for the small sum to which their expenses amount.

In regard to the probable expense of completing the building, including its fitting up and furnishing, its lighting, heating, drainage, &c., the laying out, planting, and permanent fencing of the lot, and all other expenses therewith properly connected, as compared with appropriations heretofore made for these objects, the committee report as follows:

It will be within the recollection of the board that, on the 28th of January last, resolutions were passed by the board making the following appropriations:

The contract for the building not to exceed	- -	$231,000
Fitting up and furnishing the same	do - -	20,000
Warming and lighting the same	do - -	5,000
Permanent fence around the grounds	do - -	10,000
Laying out and planting the grounds	do - -	4,000
Together	- - - - - -	$270,000

No special appropriation was made for superintendence; but the committee was empowered, by resolution of the 28th January, in accordance with the fifth section of the act organizing the institution, to "employ one or more persons to superintend the erection of the building," and they were required to cause the work to be done "to the entire satisfaction of said superintendent or superintendents." The committee believe that there is no example in this country of the superintendence of a building as extensive as that of this institution costing, including all remuneration to the architect for the original design, and all incidentals appertaining to the architect's office, less than $3,000 a year. The salary paid to a resident superintending architect of such a building, when it is his own design, is usually, without reckoning incidentals, either $2,500 or $3,000 a year. The committee are justified, then, in setting down the entire item of superintendence, (not included in the above appropriations,) with its incidentals, at $3,000 a year. In consequence of the principal architect residing in New York, it actually costs a trifle more.

Nor was any appropriation made to supply the building with water. This item, under a favorable contract, has cost $650.

The item of drainage, also, was omitted. In consequence of the municipal regulations of Washington city, it will cost from $1,000 to $1,500. The committee has put it down at $1,350.

If we add to the appropriations specifically made, these necessary items, it will appear that the scale of expenditure to which, by the action of the board, the building committee have been limited for the completion of the building and grounds, all incidentals included, was about $287,000, thus:

Special appropriations, already enumerated - -	$270,000
Superintendence, including incidentals, say five years, $3,000 a year - - - - -	15,000
Drainage, say - - - - - -	1,350
Supplying water to the building - - - -	650
	$287,000

The contract, however, for the building, has been taken at a rate much lower than the board seem to have anticipated; at a rate, too, to the credit of the achitect it should be stated, fifteen thousand dollars below his estimates. And the contractor has proceeded so far with the erection, that the committee has had a good opportunity to judge of his competency and willingness to complete the whole under the conditions of the contract. Unless prevented by accident not to be foreseen or anticipated, they do not doubt that he will do so. Under these circumstances, although the committee is aware that, in the execution of so extensive a work, many contingencies must be expected necessarily to present themselves, that will add to its cost; yet they confidently believe, that by judicious management and strict economy, the entire expenditure for the erection of the building, including the fitting up and furnishing of the same; supplying the same with water; laying out the lot in grass and planting it with trees and shrubs; fencing the same, both with the present temporary fence and the ultimate permanent one; also all expenses for superintendence of erection, including the cost of architect's office and other incidentals, so as, in fact, to cover all expenses whatever that have been incurred, or are to be incurred, on the building and on the lot on which it stands, until the completion of the building and of the preparation of the lot, up to the 19th of March, 1852, need not exceed two hundred and fifty thousand dollars, being thirty-seven thousand dollars less than the sum total according to the scale of appropriation heretofore adopted by the board.

So confident is the committee of the accuracy of the above opinion, that they are willing to see passed by the board stringent resolutions rescinding former appropriations for these objects, and restricting the committee, in their entire operations, to the above amount.

By a resolution of the board of the 5th of February last, the preparation and publication of a work to be entitled "Hints on Public Architecture," and to contain, among its illustrations, views and plans of the institution building, was intrusted to the committee; and an appropriation of a thousand dollars was made for that purpose.

In carrying out that resolution, the committee made with Messrs. Wiley & Putnam, one of the most respectable publishing firms in New York, a contract, of which a copy will be found on their journal; according to the terms of which, the committee agree to furnish the entire illustrations, which it is stipulated shall not be of less value than one thousand dollars; and the publishers, without further cost to the committee, agree to furnish a thousand copies of the volume bound in cloth, provided the letter-press does not exceed one hundred and fifty pages.

In order to give increased value to the work, the committee applied to several public bodies, having control of edifices of which the architecture is of reputable character, for plates of the same. In the case of one of the New York churches they were successful, and they hope to obtain in the same way plates of one or two other public edifices. The particulars of these applications will be found at large on their journal.

The committee hope to make this treatise, of which a portion of the manuscript is prepared, a work of practical importance, and of national interest. Among the resolutions on the journal of the committee, several will be found relating to this subject, and providing, among other things, that the forthcoming work should include a comparative review of the advantages, economy, and facility of adaptation to modern purposes, of various styles of public architecture, particularly the Grecian, Roman, modern Italian, Gothic of different ages, and Norman; giving the actual cost, compared to extent of accommodations, of some of the principal public edifices in the United States, in the various styles, including some of the public buildings erected in Washington, and elsewhere, by the general government; also, that, so far as the funds permit, the work shall contain illustrations, in the best style of art, representing such among the public buildings of the United States as exhibit the purest specimens of architecture, in various styles, including two perspective views of the Smithsonian Institution on steel; and including, also, one or more perspective views of the best designs for the institution, offered in competition.

To execute such a plan as this in a reputable manner, the illustrations, including numerous wood cuts, essential to a proper elucidation of the text, will, the committee have ascertained, cost more than the sum heretofore appropriated. The two steel engravings of the institution building in perspective cannot be obtained, executed in the best style of art, for less than $350 to $400 for the two. The committee ask, therefore, of the board an additional appropriation of a thousand dollars. By reference to a supplement recently made to the original contract with Wiley & Putnam, and of which a copy is given in the minutes of the forty first meeting of the committee, the board will perceive that such an additional appropriation, expended on illustrations, will entitle us to an additional hundred pages of letter press; making in all two hundred and fifty pages. This the committee consider important, as it is doubtful whether the number of pages to which, by the original contract, the volume was restricted, will suffice for the purpose of the work.

It will require six months, properly to execute the illustrations of this work; so that it cannot be published before next summer or autumn. The committee will proceed in its preparation as rapidly as is consistent with the proper execution of the work.

It is the purpose of the committee to add to this work, as an appendix, the result of the experiments heretofore (to wit, by resolution of the first of March last) authorized by the board, to determine the economical value of the different building materials used in the United States. This will give to the work additional value for builders, carpenters, and mechanics, generally.

For further particulars regarding the various subjects touched on in this report, the committee beg to refer the board to the copy, herewith submitted, of their journal. They think it would be useful to make that copy a portion of the annual report of the board to Congress.

They submit also, herewith, the original contracts with Dixon & Cameron, Joel Downer, Caleb Buckingham, and Wiley & Putnam; and the security bond signed by Dixon & Cameron, Winter, and Butler.

All which is respectfully submitted.

ROBERT DALE OWEN.
W. W. SEATON.
JOS. G. TOTTEN.

DECEMBER 7, 1847.

No. 2.

Journal of the Building Committee of the Smithsonian Institution, from the 17th February to the 1st December, 1847.

[Mr. Owen, Chairman.]

FIRST MEETING—February 17, 1847.

Present, Messrs. Seaton, Hough, and Owen.

On motion of Mr. Hough, it was

Resolved, That Robert Mills, architect, be superintendent, at the rate of one thousand dollars per annum, to commence at this date, and continue at the pleasure of the committee.

Mr. Renwick, architect, being present, was requested to see Mr. Mills and engage his services.

On motion of Mr. Seaton, it was

Resolved, That 100 copies of the specifications prepared by the architect be printed, for the use of contractors.

And, on motion, the committee adjourned.

SECOND MEETING—February 23, 1847.

Present, Messrs. Seaton, Hough, and Owen.

The chairman laid before the committee the following letter from the Hon. Louis McLane:

Baltimore, *February* 22, 1847.

Dear Sir: I understand from our chief engineer that Mr. Howard will recommend to his board of directors, on Wednesday next, to agree to transport the marble on their railroad at 2½ cents per ton per mile; and if that rate be adopted, I should recommend the adoption of a similar charge upon the road of this company. My final answer, therefore, must await the action of the other company.

I am, dear sir, very respectfully, your obedient servant,

LOUIS McLANE.

To the Hon. Robert Dale Owen.

On motion of Mr. Hough, it was

Resolved, That Mr. Renwick be allowed annually the sum of eighteen hundred dollars for superintendence, besides his necessary travelling expenses between New York and Washington, and the necessary incidental expenses of the architect's office; the said salary to commence on the day his plan was adopted by the committee of five.

The chairman laid before the committee a letter from Philip McGaughlin, dated Point of Rocks, Frederick county, Maryland; in which he informs the committee that a quarry of the very best marble, and of great extent, is to be found there, close to the Chesapeake and Ohio canal, and has been examined by himself, and asks the committee to send some suitable person to examine the same.

On motion of Mr. Seaton, it was

Resolved, That Dr. Owen be requested to proceed to visit the said quarry, and also the marble quarries in the vicinity of Baltimore, and to report thereon to this committee; also, that he be requested to aid Mr. Renwick by preparing the drawings for the chemical department.

The chairman stated to the committee, on the part of Dr. Owen, that any services performed by him for the institution would be gratuitous; his actual travelling and other necessary expenses only being paid.

On motion, the committee adjourned.

THIRD MEETING—March 1, 1847.

Present, Messrs. Seaton, Hough, and Owen.

The chairman laid before the board the following letter from Mr. Samuel Worthington, of Maryland, brother of the ex-member of Congress of that name:

Baltimore County, *February* 26, 1847.

To the Building Committee of the Smithsonian Institution:

Gentlemen: I will agree to furnish, and have placed on cars at Cockeysville, any quantity of marble for rubble work, from the quarry, undressed other than broken as near the required size as practicable, at $1 25 per perch; or, if by the ton, at $1 per ton. Any marble that may be wanted other than the above, I will deliver on cars, as above, at 70 cents per cubic foot for all sizes under forty feet, and for all above forty feet 85 cents per foot.

Respectfully, your obedient servant,

SAM'L WORTHINGTON.

The chairman laid before the committee a reply prepared by him to the above letter, as follows:

Washington, *March* 1, 1847.

Sir: I yesterday received your letter of the 26th of February, addressed to the building committee of our institution, and shall lay it before the committee, which meets to-day.

Will you have the goodness, in addition to the proposals contained in your letter, to state to us at how much *per perch of twenty-five feet, measured in the building*, you would be willing to rent to us the quarry-right for so much marble as we may require for our building—say about five thousand perches in all.

I think the Maryland marble, including the specimens I have seen from your quarry and from others in the neighborhood, is of very fair quality, and only needs a reputation to bring it into general use. But it is necessary for us to get the quarry right low, or else the New York marble, which is also of excellent quality, will come into competition with it. The owner of the Hastings quarry, on the North river, has offered the quarry-right, for the sake of the reputation it will obtain if selected by our institution. But I think the freight from there may be a trifle higher than that by railroad, if the railroads come down, as I think they will, to 2½ cents per ton per mile.

Whatever material and quarry we may select, the particulars regarding it will be published by us in connexion with the plans of the building, and a copy sent to every literary and scientific society of any importance not only in this country, but throughout Europe. The reputation of the quarry we may select will therefore be known all over the world.

If we contract for the quarry right, we shall have to do so subject to the decision of the two railroads to reduce their freight to $2\frac{1}{2}$ cents per ton per mile.

This will be handed to you by my brother, Dr. Owen, a geologist, who is instructed by our board carefully to examine the various Maryland quarries, including one at the "Point of Rocks," from which specimens have recently been sent to us. You will oblige the committee by affording Dr. Owen every facility to examine your quarry.

If we agree to rent of you the quarry right, we should expect to go into the quarry where you are at work. But this need not at all embarrass your own operations.

If we agree to pay half the expenses of a railroad to connect your quarry with the York road, so that the cars could be loaded in the quarry, will you agree to pay the other half? Please reply to this.

I am, sir, your obedient servant,
ROBERT DALE OWEN,
Chairman of Building Committee.

SAMUEL WORTHINGTON, Esq.

The reply was approved by the committee.

The chairman laid before the committee a letter from Wm. Robinson, owner of a Maryland quarry of "white primitive stone," which he offers for the Smithsonian building.

Referred to Dr. Owen.

The chairman laid before the board a letter from Peter Gorman, stating that he had found a quarry superior to any other he had visited, (Samuel Worthington's,) and which could be rented on cheap terms.

The chairman informed the committee that he had seen Mr. Gorman since the receipt of this letter, and he (Mr. G.) stated that Mr. Worthington was willing to rent his quarry for the purposes of the institution at *twenty cents per perch* quarry right.

Letter laid on the table.

The chairman laid before the committee the following letter from Mr Howard, president of the Baltimore and Susquehanna railroad:

OFFICE OF THE BALTIMORE AND SUSQUEHANNA RAILROAD CO.,
Baltimore, February 24, 1847.

DEAR SIR: In compliance with your request, I submitted to-day the proposition that we should unite with the Baltimore and Ohio Railroad Company in transporting rough marble for the Smithsonian Institution, from the quarries in Baltimore county to Washington, at a charge of $2\frac{1}{2}$ cents per ton per mile for the whole distance.

I regret that I cannot yet give you an answer. The period has now arrived for the appointment, by our legislature, of directors of the company on the part of the State, who will constitute a majority of the whole board.

Expecting every day to hear of such appointment being made, the directors have not deemed it expedient to enter at this moment into a contract which will last for several years, and thereby forestall the action of their successors, should the legislature think proper to make any changes in the board.

This question will probably be settled before this day week, when I hope to be prepared to give you the decision of the company.

Hoping that this unavoidable delay may not be productive of any inconvenience to the Regents of the institution, or to the committee of that body with which you are acting,

I am, very respectfully, your obedient servant,
CHARLES HOWARD, *President.*

Hon. Robert Dale Owen,
Chairman of Building Committee.

The letter was laid on the table.

On motion of Mr. Seaton, it was

Resolved, That, as the specifications were not furnished by the printers by the time appointed by public advertisement, for the inspection of bidders, the time for receiving bids for the work specified in the advertisement of the building committee be extended from the 10th to the 15th inst.

On motion, the committee adjourned.

FOURTH MEETING—March 6, 1847.

Present, Messrs. Seaton, Hough, and Owen.

Mr. Seaton laid before the committee a letter from Mr. Peter, owner of a quarry on the margin of the canal, near the mouth of Seneca creek, as follows:

Monte Video, (*near Darnestown, Montgomery Co., Maryland,*) *December* 9, 1847.

Dear Sir: Yours of the 5th inst. was received by yesterday's mail, in which you state that the Regents of the Smithsonian Institution have in their possession a specimen of red sandstone taken from my quarry, on the margin of the canal. I am unable to determine from which particular quarry the specimen they have in their possession was taken, as several have been opened, and there is a continuous line of a mile in length of similar stone, equally convenient to the canal.

The aqueduct at the mouth of Seneca creek, and many of the locks both above and below, are constructed of stone derived from my land.

The jury, in condemning the quarries for the use of the canal company, allowed me twenty-five cents a perch for the backings; that is, all stone intended for cut work, twenty-five cents—all calculated for hammered work, twelve and a half cents a perch; and for these prices would I grant permission to obtain stone for any purpose.

The excellence of the material—for it is capable of withstanding any exposure—the facility with which it is obtained, and the ease with which it may be transported by the canal to the spot where required, would, I should suppose, give it a decided preference over any stone which could be brought in competition with it, for the purposes of the institution.

As to quantity, it is unbounded, and in texture and shade a great variety; and in such a building as, I have no doubt, the Smithsonian Institution will be, would present not only an appropriate, but a pleasing contrast with the other public edifices in Washington.

It would afford me great pleasure to see it selected by the Regents as the material of which the edifice shall be constructed; and the very liberal price at which it is offered, may, I hope, have its influence in securing its adoption.

It will afford me pleasure to answer any inquiry the Regents may desire to make in relation to the stone, and to afford every facility to an agent, should they think proper to send one, in making any examination.

Yours, very respectfully,
JOHN P. C. PETER.

W. W. Seaton, Esq.

On motion of Mr. Seaton, is was

Resolved, That on the return of Dr. Owen from the marble quarries of Maryland, he be requested to visit the different sandstone quarries in the vicinity of Seneca creek, and make a report on their extent, and their general character and fitness for furnishing a suitable material for the Smithsonian building.

Mr. Owen submitted the following letter:

Baltimore County, *March* 6, 1847.

Sir: Yours of the 1st inst. has deen duly received, and, in reply, I would state that I am almost entirely uninformed as to the sizes of the stone required, and am at a loss how to propose for the material.

If you would do me the favor to send me, immediately, a specification of the stone wanted, I will then propose for the stone, whether the rubble stone is to be worked and made ready for the mason, or in the rough state from the quarry.

You may have misapprehended my former letter: that was for the rough and the ordinary size building-stone. As to the quarry right, the price would depend much on which quarry you might want the right to quarry into; I have several. I should be much pleased to furnish you with what stone you may want, should you determine to use our stone, and think the material to be as good as any in our neighborhood.

Please write immediately on the reception of this, in order that I may have time to propose by the 20th inst. I was this day with some of the directors of the Susquehanna road, and I think they will agree to take the proposed amount—that is to say, 2½ cents per mile.

Respectfully, your obedient servant,
SAMUEL WORTHINGTON.

Hon. R. D. Owen,
Chairman of Building Committee.

On motion of Mr. Seaton, it was

Resolved, That the reply to the above be postponed until the return of Dr. Owen from Maryland.

The chairman laid before the committee the following report from Dr. Page, appointed to make examination of building-materials:

To the Building Committee of the Smithsonian Institution, on the action of frost upon certain materials for building.

Of the twenty-five specimens of stone submitted to me for examination with reference to their relative properties in resisting the disintegrating action of frost, I have been able to investigate but twenty-two; the remaining specimens, marked, respectively, 1, 9, 5 D, being too small to submit to the test. It was thought desirable to ascertain their specific gravities, with a view to determine if any connexion existed between their densities and liability to dilapidation. The result leads us to infer that such relation does not exist, and that the texture of the stone, without reference to density, determines its frangibility under the influence of frost. Resort was had in these experiments to an *imitation* of the operation of freezing water after the process described by Brard, a French chemist, in the "*Annales de Chimie et Physique,*" vol. 38. The details of the process will presently be given.

The absorption and subsequent freezing of water within the stone would have been a more energetic mode of action; but the undertaking would prove one of considerable practical difficulty, and, on the whole, not so reliable as an experiment, unless, perhaps, the circumstances were such as to admit of their exposure to *natural* freezing under favorable circumstances.

The process of Brard consists in substituting the crystallization of the sulphate of soda for the freezing of water, and has met with the approval of many French architects and engineers, as the results accord with their experience. In the freezing or crystallization of water, the expansion is such, that the crystals float; while in the crystallization of sulphate of soda, and other soluble salts, the crystals sink in the solution; but, notwithstanding, the exertion of the crystalline forces of these salts is sufficient to produce decided impressions upon the hardest of building materials in a few weeks.

The specimens of stone furnished me by your board were all numbered as according to the subjoined table; and it may be proper to remark, that their localities and respective values, as usually estimated, were unknown to me until after the results of the experiments had been laid before you and approved.

Six numbered specimens were also handed to me by Mr. Dewey, and are marked, respectively, 1 D, 2 D, &c. The specimens were cut into inch cubes; three of the whole number being of insufficient size, were laid aside, as above mentioned. The cubical blocks, suspended by strings, to which the respective numbers upon labels were attached, were first immersed in a boiling solution of sulphate of soda, saturated when cold; and after remaining half an hour in the boiling liquid, they were removed and hung upon a frame over half-pint bowls, containing also a quantity of the cold saturated solution.

In the course of 24 hours a considerable efflorescence was found upon the surface of each specimen, consisting of the crystals of the salt mixed with comminuted portions of the stone. These were washed off daily, by simultaneously immersing the stones in the solution in the bowls, and suffering them to remain there for a few minutes. This proceeding was repeated daily for one week, when it became necessary to deviate from Brard's directions, and to keep them in a moderate temperature, instead of a cold cellar, as he advises. It was obvious that the investigation would be exceedingly protracted unless the crystallization of the salt were promoted by moderate warmth, as by this time the detritus from some specimens was hardly visible.

After the change, the process went on with greater rapidity; and at the end of four weeks the dipping was stopped, and the sediment or deposite in each bowl was carefully weighed, and furnished the results as given in the table. In some cases the comminution of the stone was exceedingly fine; and in the washing and decanting process, ample time was allowed for the deposite to settle after each washing, and the utmost care used in the subsequent operations of decanting, drying, and weighing. The time of one week for the operation of dipping the stones in the solution was not deemed sufficient, as the deposite from the marbles and some other varieties was hardly apparent; and it was therefore continued, as above stated, four weeks, and thus the slight errors of manipulation, if any occurred, are proportionally diminished.

Disintegrating effects of frost upon stones used for building-materials.

Specimens marked,		Specific gravity.	Loss by frost, in grains.
No. 1	Not tested; the specimen being too small.		
No. 2	Symington's close-grained marble (similar to Worthington's) - - - -	2.834	0.19
No. 3	Connecticut sandstone, coarsest-grained quality - - - - -	not ascertained.	14.36
No. 4	Dark red Seneca sandstone (similar to Peter's)	2.672	0.70
No. 5	Symington's large crystal marble - -	2.857	0.50
No. 6	Symington's blue limestone - -	2.613	0.34
No. 7	Coarse, large crystal marble, Mt. Pleasant, New York - - - -	2.860	0.91
No. 8	Port Deposite granite - - -	2.609	5.05
No. 9	Too small to examine.		
No. 10	Trinity sandstone, fine-grained and light-colored - - - - -	not ascertained.	1.58
No. 11	Connecticut sandstone, finer-grained quality	2.583	24.93
No. 12	Nova Scotia sandstone, coarse grained -	2.518	2.16
No. 13	Light Seneca sandstone, dove-colored -	2.486	1.78
No. 14	Pennsylvania marble, close-grained - -	2.727	0.35
No. 15	Pennsylvania blue limestone - -	2.699	0.28
4 T C	Trinity church light colored, close-grained sandstone, New Jersey - - -	2.482	0.62
P O	Patent Office light sandstone - -	2.230	18.60
S B	Soft brick - - - - -	2.211	16.46
H B	Hard brick - - - - -	2.294	1.07
1 D	Granite from Potomac Great falls - -	Not ascertained.	0.35
2 D	Dark coarse sandstone, of Seneca aqueduct, Peter's quarry - - - -		5.60
3 D	Sandstone four miles above No. 2 D, Peter's, next west of Beaver dam quarry -		1.58

TABLE—Continued.

Specimens marked,		Specific gravity.	Loss by frost, in grains.
4 D	Dark sandstone, from quarry near Wood's residence - - - - -	Not ascertained.	3.94
5 D	Not tested, specimen being too small.		
6 D	Lower stratum, Beaver dam quarry - -		1.72

Respectfully submitted by

CHARLES G. PAGE.

WASHINGTON, D. C., *March* 5, 1847.

Laid on the table.

On motion of Mr. Seaton, it was

Resolved, That Mr. Hough be a sub-committee to revise the details of the specifications, with a special reference to the solidity, security, and economy of the building, and to report thereon to this committee; specifying what changes, if any, he may deem necessary or expedient.

On motion of Mr. Seaton, the following resolution was adopted:

Whereas the Board of Regents did, on the 5th day of February, pass the following resolution, to wit:

"*Resolved*, That the building committee, in conjunction with the Secretary, be authorized to publish, in such form as they may deem most appropriate, one thousand copies of a brief treatise, to be entitled "Hints on Public Architecture," and to be illustrated with designs of the plan of the building adopted for the Smithsonian Institution, and, at the option of the committee, with any other designs that are the property of the institution: *Provided*, that the cost of the same shall not exceed one thousand dollars, which sum is hereby appropriated for that purpose:" Therefore,

Resolved, That Mr. Owen be a sub-committee to prepare, after consultation with the Secretary, the said treatise, and to contract for the necessary illustrations; provided he submit the same to this committee before publication.

The chairman submitted a table of the value of different kinds of plank and scantling—Mount Crawford, Rockingham county, Virginia.

Referred to the architect.

On motion, the committee adjourned.

FIFTH MEETING—MARCH 12, 1847.

Present, Messrs. Seaton, Hough, and Owen.

The chairman laid before the committee the following letter from the chief engineer of the Baltimore and Ohio Railroad Company:

ENGINEER'S OFFICE, BALTIMORE AND OHIO RAILROAD,
Baltimore, March 1, 1847.

SIR: I have been requested by Mr. McLane, the president of this company, to communicate to you that the Baltimore and Susquehanna Railroad Company has not yet decided to join this company in the trasportation of marble, in the rubble form, to Washington, for the buildings of the Smithsonian Institution, at the rate (2½ cents per ton per mile) suggested by you. The president of the Susquehanna Company informed me to-day that he would apprize you by letter of the reasons of the delay on the part of his company.

I have only now, by Mr. McLane's desire, to repeat that the Baltimore and Ohio Company is ready, upon reasonable notice, to enter into the transportation, whenever the Susquehanna Company is prepared to unite with it in the operation, at the rate which has been mentioned.

I am, sir, very respectfully, your obedient servant,

BENJAMIN H. LATROBE,
Chief Engineer.

HON. ROBERT DALE OWEN.

Laid on the table.

The chairman laid before the committee the following letter from the president of the Baltimore and Susquehanna Railroad Company, relative to rates of freight:

OFFICE BALTIMORE AND SUSQUEHANNA RAILROAD CO.,
Baltimore, March 8, 1847.

DEAR SIR: I am now authorized to say that the president and directors of this company will unite with those of the Baltimore and Ohio Railroad Company in an agreement to transport the limestone or rough marble for the building of the Smithsonian Institution, from the quarries on the line of the railroad of this company to Washington, a distance of 53 miles, for 2½ cents per ton of 2,000 lbs. per mile. The company will agree to carry 75 tons per week whenever required.

From the communications I have had with the officers of the Baltimore and Ohio Company, I feel well assured that no difficulty will be experienced in making such an arrangement with the two companies as will be entirely satisfactory to the building committee of the Regents, and to the person with whom they may contract.

Very respectfully, your obedient servant,

CHARLES HOWARD, *President.*

HON. ROBERT DALE OWEN,
Chairman of the Building Committee.

Laid on the table.

The chairman laid before the committee the following letter, containing proposals to furnish marble from the State of New York:

NEW YORK, *March* 6, 1847.

GENTLEMEN: I will furnish white marble from my quarry at Hastings, on the Hudson river, for the Smithsonian Institution, as follows:

110,000 feet of rubble facing, 1 foot thick, at 30 cents per foot, measured in the wall - - - - -	30 cents.
20,000 cubic feet dimension do. do., for cutting, at 98 cents per cubic foot - - - - - -	98 "

Delivered in the city of Washington.

Very respectfully,

JOHN B. GLOVER.

A. R. Raymond, bondsman.

Hon. Robert Dale Owen,
William J. Hough,
W. W. Seaton,
Building Committee.

Laid on the table.

The chairman laid before the committee the following letter, making proposals to furnish marble from Massachusetts:

West Stockbridge.

Dear Sir: I understand from Mr. Hooker, of New York, that your plan has been adopted for the Smithsonian Institution, and that you are receiving proposals for marble for buttresses, blocks, caps, coping, and ornamental bands. I submit the following proposition for your consideration:

I propose to furnish you blocks of marble, for all sizes under 4,000 lbs. weight, for eighty cents per cubic foot, trimmed near the size, and delivered at Washington.

I have not the plan before me. Mr. Hooker states that there will be from twenty-five to thirty thousand feet of said stone; if that is the quantity, I will pledge myself to furnish it in two years from the date of contract, or comply with your terms in regard to time.

Yours, &c.,

MILO M. PARRISH.

Surety—Thomas Milligan, Wm. Milligan, Gilbert Milligan.

Mr. Renwick, *Architect.*

N. B.—Furthermore, I think that it would be advisable to try Stockbridge marble; it can be worked for some six cents cheaper than any other marble in this country.

Mr. Thomas Milligan was one of the firm of Leonard and Milligan, who had a contract on the water-works at Dob's ferry.

Laid on the table.

The chairman laid before the committee the following letter, making proposals to furnish lumber, from Philadelphia:

Philadelphia, *March* 9, 1847.

Gentlemen: I do hereby propose to deliver all the lumber required in the erection of the Smithsonian Institution, including hemlock, white pine, yellow pine, (including the flooring,) for the sum of twenty-six dollars per thousand feet, and will give security for the faithful performance of the contract.

I consider my bid as worthy the notice of the committee, and would be glad to confer with them on the subject, should they deem it advisable.

I have on hand a large supply of seasoned lumber, and arrangements for the supply of any quantity wanted.

I would respectfully refer the committee to the Hon. James Buchanan, Secretary of State, should they desire information as regards my ability to perform any engagements I may enter into. Please address me at this place if you wish me to go on to the city of Washington.

Very respectfully, your obedient servant,

SAML. M. LEIPER.

To the BUILDING COMMITTEE
of the Smithsonian Institution.

Laid on the table.

The chairman submitted, from Dr. David Dale Owen, the following

Report on the Baltimore county quarries.

To the Building Committee of the Smithsonian Institution:

GENTLEMEN: In conformity with your instructions, I have examined a number of quarries in the vicinity of Baltimore, and also one at the Point of Rocks, with a view to ascertain the extent and quality of the building material they furnish, and report as follows:

Extensive quarries of white crystalline marble commence about twelve and a half to thirteen miles from Baltimore, near a small village called Texas, or Clarksville, on the line of the Susquehanna railroad.

The first quarry visited is that owned by Fell and Robinson, who are largely engaged in lime-burning. It lies on the west side of, and only a few paces from, the main track of the railroad. The surface layers are, by barometrical measurement, forty feet above the level of Cold Spring creek, a small stream running through this quarry; and ledges of marble extend down to the banks of that stream and form its bed; varying, however, at different heights, somewhat in texture and appearance.

The purest variety in this quarry is of a coarse and highly crystalline structure, varying in tint from a pure white to a faint shade of bluish or grayish white, as may be seen by inspection of the various specimens. It is known to the quarrymen under the name of "*alum limestone.*"

The course of this purer variety is northwest and southeast, with an average width of 150 feet, and extending 525 feet back to Fell and Robinson's west boundary line. Taking the average depth of this quarry at 18 feet, its solid contents may, therefore, be estimated at 18 × 150 × 525 = 1,417,500 cubic feet, or 56,700 perches, in this single quarry.

North of this white crystalline marble, the rock gradually assumes a shade of blue or gray, as may be observed by inspecting specimen No. 4.

The upper layers at Fell and Robinson's quarry are banded with light gray veins. Below this are at least three feet of pure, highly crystalline, white limestone. Judging from specimens detached from the inferior projecting layers, there is evidently a great body of the same kind of rock beneath, with probably some banded beds, similar to the upper beds previously described.

On the east side of the railroad and close to it, some four hundred or five hundred yards from Robinson and Fell's quarry, Griscom and Borrough have opened quarries. The rock here is of the same character as that in Robinson and Fell's quarry, and equally good; see specimens Nos. 2 and 2*a*. Some nests in this quarry are of a closer grain than the main beds; see specimen No. 2*ab*.

The ledges of this rock, wherever it projects through the soil, and has been exposed probably for ages, have a dark appearance on the surface, apparently from incrustations of lichen; but when broken, the discoloration is seen to be superficial, not extending at all into the substance of the rock: see No. 5*b*.

The dip of the beds seems to be generally to the southwest, at an angle of perhaps 20° to 25°.

There is no difficulty in draining these quarries, since there is twenty to forty feet of rock entirely above the level of water drainage.

The top layers are sometimes in detached and more or less rounded masses; owing, no doubt, to the corrosive influence of water containing carbonic acid, or some organic acid, percolating through the superficial soil, corroding and dissolving the accessible edges of the calcareous layers.

Over the upper beds lies usually ferruginous earth of deep red color, forming a remarkable contrast to the snow-white marble beneath; indeed, this appearance on the surface might, perhaps, often serve as a guide to the detection of the white marbles of this region.

Symington's quarry lies in the same vicinity, about three hundred to four hundred yards from the main track. The owner of this, as well as the other quarries here, intend to have *switches* (that is, lateral branch railroads) running into their quarries.

The rock here is of a rather finer crystalline structure than that of the preceding, with a slight cast of blue; see specimens Nos. 3 and 3*a*. A solid bed is exposed, of nearly uniform texture, about nine feet thick. Blocks weighing several tons are now lying in the quarry. At the top of the quarry there are some beds with gray mica disseminated: such must, of course, be rejected. The dip is here as at the other quarries.

Thirteen and a half miles from Baltimore and half a mile east of the railroad, and about one mile northeast of the previously described localities, is a quarry on land owned by Chisilla Owens. The rock here is also a white and highly crystalline marble, of a good color, similar to that in the vicinity of Texas; but the quarry is not yet opened: the surface indications are, however, very favorable for a body of good "alum limestone." For sample of this material, see specimen No. 6.

In the vicinity of the same railroad, a little further to the north in the neighborhood of Cockeysville, fourteen to fifteen miles from Baltimore, are several other marble quarries.

The first visited was on land owned by Mrs. Taylor, and situated about a quarter of a mile west of the railroad. The rock exposed here differs from that of the Texas quarries, in being rather closer-grained and the surface layers more granular; see specimen No. 5. At this locality a block was got out upwards of seventeen feet long, which was presented to the building committee of the Washington monument at Baltimore; out of this block the statue on the summit was sculptured.

Loose blocks of similar character to that in the quarry are seen all over the surface of the adjacent hills.

The lower beds are not exposed in Mrs. Taylor's quarry.

Four hundred to five hundred yards nearer the railroad, a better cemented and rather more compact marble crops out to the surface; but no quarry is opened here, to enable one to form a correct judgment as to the extent, thickness, or uniformity of the beds. Still, from the persistency of the same material throughout this region, one may predict, with tolerable certainty, that there is here, deeper seated, a great mass of valuable material.

Part of the marble employed in the construction of the Washington monument at Baltimore was obtained at this quarry of Mrs. Taylor's, and part of it from Scott's quarries, five miles further to the north. The latter is said to be of an inferior quality. Of this I had no opportunity of judging personally, as I did not visit the quarry, thinking it was too far out of the way.

Three quarters of a mile from the railroad, and a mile and a half or two miles northeast from Texas, is another quarry, on Mrs. Taylor's property. This quarry has been wrought for fifteen years, and supplied Baltimore with a great deal of marble. The upper layers, (see specimen No. 5 *b*,) at this place, are, from some peculiarity, either of texture or chemical composition, much disposed to crumble to calcareous sand, which has been employed to advantage as a mineral manure on land. The inferior beds are of a sounder material, and lie more regularly than usual, but the rock is not of as pure a color, being banded with gray stripes; see specimen 5 *c*. Dip very slight to the south.

One hundred yards south of this is another quarry, on Chisilla Owens's property. This rock is of a beautiful texture and good color, as may be seen by specimens No. 5 *d* and No. 7. It lies in tolerably distinct strata, and nearly horizontal, but it is traversed by minute cross-fissures, which detract much from the value of the material, inasmuch as large solid blocks cannot be got out, at least from the exposed layers; a sounder material may perhaps be obtained lower down.

A little northwest of this is Baker and Conly's quarry, near Beaver Dam creek. This quarry is well opened, presenting a perpendicular face of fifteen feet or upwards; four and a half to five feet in this quarry, as far as opened, is tolerably good marble, (see specimen No. 8;) but the upper beds are of inferior quality, being contaminated by a thin interlamination of mica in the interstices of the stratification.

Nests of sulphuret of iron also occur here, which would render necessary a very careful selection. There are at present in this quarry several blocks that would fill a room of ordinary size.

Between this quarry and Chisilla Owens's quarry, on Beaver Dam creek, and about two hundred to three hundred yards from the last described, Mr. Baker has quarried out a considerable quantity of white marble of very superior quality. Unfortunately, the ledges of rock here are but little above the level of Beaver dam; it is said, however, that when this quarry was worked, it was easily kept drained by a one-horse pump. The fact of good marble occurring at this low level on Beaver dam, renders it more than probable that good marble will be found in the adjacent quarries just mentioned at a considerable lower level than where they are now worked.

On the northwest branch of Beaver dam, between fifteen and sixteen miles from Baltimore, and rather more than a mile from the railroad, are Mr. Worthington's marble quarries, and saw-mill for cutting it into dimension-stone.

The rock in this vicinity is mostly composed of small aggregated crystals, of less size and finer texture than the "alum marble."

The old quarry was first visited. It is situated on a hillside, fifteen feet, by the barometer, above the drainage level of the northwest branch of Beaver dam. The top rock here is not pure, nor even bedded; but beneath, at the above level, commences a marble of snowy whiteness, passing into one with a blue tinge; see specimens 10*w* and 10*bl*. This marble spauls with ease and precision, nearly as well on the edge as the bed, and is free to work in every way. This is also the case with the marble taken from Baker's lower quarry; and indeed all the finer marbles have the same property, unless they are laminated and schistose. The marble here admits of being split out of considerable length, twenty or even forty feet. The face, however, when thus split, is more or less irregular, varying four to six inches or more from a true level surface.

On the other hand, the facility of spauling enables it to be brought to the desired dimensions with comparatively little labor. The blue-tinged variety quarried here is but little inferior in appearance to the virgin white. Both varieties, though they do not admit of receiving a high polish, like the best quality of Carara marble, can nevertheless be wrought into very fine ornamental work, with a beautifully sharp arris, as may be seen by the specimen with raised lettering, and that cut into a capital carved by Mr. Parkie, of Baltimore.

The lower beds are not exposed on the quarry face, but outcropping ledges can be seen in various places around the slopes of the rising ground; also in the bed of the creek, and everywhere in the bottom, where ditches have been dug two to three feet deep; all indicating that a region of country of three quarters of a mile square is underlayed by rock of similar character.

Mr. Worthington has opened a new quarry on a hill about half a mile southwest, and by barometrical measurement 40.8 feet above the level of the northwest branch of Beaver Dam creek, at the stone saw-mill. This quarry is about three-quarters of a mile on the east side of the railroad. The upper masses are alone at present exposed.

They are rather more disposed to crumble than the best quality of the old quarry rock, but it is far superior to the upper beds at that locality, and there is every reason to believe that the best quality of rock is not yet reached; indeed, probe-holes have been already sunk three feet into the floor of the present quarry, which show that there are solid ledges of white marble of the same texture beneath.

The hill on which the new quarry is situated is estimated, at the lowest calculation, two hundred yards square; and it may be excavated for twenty-five feet in depth without being incommoded with water.

Within the last five years, at least twenty-five thousand cubic feet of dimension-stone have been taken out of these two quarries.

An experienced stonecutter of Baltimore, who has worked a great deal of fine-grained marble, thinks there may be some difficulty in procuring dimension-stone of that quality of greater thickness than twenty inches. The same individual is of opinion that Baker's lower quarry might furnish a material of uniform color, of greater thickness. He has worked both the fine and the coarse crystallized marbles of Baltimore county; and his experience is, that the fine-grained marble dulls the tool more than the "alum stone," and is more difficult to saw, because, as he expressed it, the fine-grained rock contains most flint. He is, moreover, of opinion that the fine grained is rather more apt to stain. There is a difference of opinion, however, on these matters. An accurate chemical analysis would throw light on this subject. There is also a difference of opinion as to the presence and proportion of magnesia in the different samples of these rocks. Some contend that the coarse crystalline marbles contain most magnesia, and that none of these Baltimore marbles have less than five per cent. of that alkaline earth. These are points which can be alone settled by minute chemical researches. Such analysis would also throw much light on their comparative durability; since, in the opinion of recent writers on this subject, the greater the proportion of *accidental* magnesia, the more liable the rock is to disintegrate until it reaches a quantity equivalent in proportion to the lime, and then unites with it to form a true dolomite or magnesian limestone; a very durable building-material, and the same which was selected, after careful research, for the exterior of the new Houses of Parliament in England.

As already remarked, iron pyrites (bi-sulphuret of iron) occurs occasionally in these marbles, in nests, both at Worthington's and Baker's quarries; see specimen 10 *p*. This mineral is much prone to undergo chemical changes by the action of the oxygen of the atmosphere: the sulphur passes into the state of sulphuric acid, the iron into oxide of iron, forming copperas or bi-sulphate of iron, a salt easily soluble in water, which is gradually removed; leaving, of course, a cavity in which water may lodge and freeze, whilst at the same time the oxidation of the iron spreads a disagreeable ferruginous yellow stain around the spot. For this reason great care should be taken, in selecting marble, to reject all masses contaminated with this mineral.

The only locality in the neighborhood of Worthington's quarries where a marble of the structure of the "alum stone" was observed, is in the immediate vicinity of his dwelling house; here, for a short distance, a white marble of that texture occupies the surface. Three hundred to four hundred yards beyond, on Prospect Hill, at a height of two hundred and twenty-one feet above the bed of the northwest branch of Beaver Dam creek, a highly ferruginous mica slate, charged with garnets, reaches the surface: this seems to be the boundary of that formation on the east. This garnetiferous micaceous schist may possibly serve to define the limits of the white marble formations, and may, perhaps, be the means of detecting these metamorphic marbles elsewhere.

One mile north of Texas, close to the railroad, is a quarry owned by Chisilla Owens, and now worked by Mr. Cooper. The rock here is well bedded, and may be quarried with ease; but the beds are, for the most part, thin, and there is an interlamination of mica. Here the dip is to the northeast, in an opposite direction from what it is in the Texas quarries. There is a bed of white crystalline marble ("alum stone") in this quarry, of about two to two and a half feet thick; whether it extends of uniform appearance and thickness through the hill, is not clearly seen in the present state of the quarries. The blocks lying in the quarry are of very regular dimensions, and the surface comparatively even, but they are not large, and many of the beds are interlaminated with mica; see specimen No. 11.

In the vicinity of Texas is a quarry owned by Judge Nesbitt, which has afforded some good white marble of a rather finer grain than that of most of the quarries in this vicinity; see specimen No. 12. I had not an opportunity of examining this quarry in person.

South of Fell and Robinson's quarry at Texas, on land owned by Mr. Cockey, there is some fine, white, close-grained crystalline marble. It lies, however, low—not more than eight or ten feet above the bed of Cold Stream creek. The quarry is not open, so that one cannot judge of the bed. Mr. Cockey says the same kind of rock has been found half a mile west. This is the only proof of its being extensive.

On the whole, it appears that there is a region of country extending for about two miles from north to south, and three-quarters to a mile from east to west, occupied by this marble, extending from the level of the water-courses to forty to forty-five feet above the same, and constituting the whole of the hills within this tract of country; not all of the purest white, but varying from a snow-white to a light blue. It may be estimated that about one-third is of tolerable purity, and either of the crystalline texture or of the fine grained crystalline structure, approaching in quality to the Carara.

Nor can this be considered the limit of the formation. Scott's quarry, five miles beyond these, in the vicinity of the railroad, supplied a portion of the material for the Washington monument at Baltimore, and other quarries of white marble were pointed out to me from Prospect Hill, several miles off.

It cannot be doubted that these quarries are capable of supplying an unlimited amount of fine building-material, either of the fine-grained marble or of the "alum stone." Whether the former could be obtained for the entire Smithsonian building, of a uniform color, free from gray spots and veins, is less certain; though Worthington confidently asserts, if he be permitted to supply white and faint-blue indiscriminately, similar to specimens Nos. 10 *w* and 10 *bl*, he can furnish far more than the building requires, without blemish.

From all I have seen and heard, I incline to believe that the fine-grained marble will be somewhat more expensive to cut than the "alum stone;" but, on the other hand, if the ornaments have bold projections, and much undercutting, the coarser "alum stone" is unsuitable; it chips off more readily, and is less tough than the finer-grained varieties.

The "alum stone," as far as I can learn, works much like the Westchester marble; and if in the latter all the necessary Norman ornaments can be cut, so can they also, most probably, in the former.

After the inspection of the Baltimore marble quarries, I proceeded, according to instructions, to the Point of Rocks, to examine Mr. McGlauchren's quarries.

I found them situated on Hook's run, two and a half to three miles west of the Point of Rocks, or about seventy-three miles from Baltimore, embraced in highly disturbed, contorted, and deranged chloritic and talcose schists, and distant only about three miles from the brecciated Potomac marble formation.

Nothing but hand specimens, and a few surface rock for making lime, have been as yet procured here, so that there is but little opportunity of judging the extent of the formation. The surface indications are not favorable, neither as regards uniformity of texture and composition, nor yet extent of beds.

The chloritic schists dip here at a high angle to the south. The outcrop of the white calcareous rock in question lies at the base of a hill on Hook's run, about twenty to twenty-five feet high, and pitches at an angle of some forty five degrees into the base of the hill, which is here on a level with the bed of Hook's run, at the same time inclining to the west, so that it is inaccessible except at great expense of labor.

There is a somewhat better exposure of the Hook's run marble at a little higher level, on a hill a few hundred yards to the south; and here the best specimens were procured; see No. 15. Part of the ledge is composed of white calcareous layers, which are said to be susceptible of a polish. The rock at both places has a ragged, irregular, and uneven fracture, and is so interspersed with white and green talc, that it cannot be considered of much value as a building-material. It is possible that beneath this a purer and better rock might be reached; but the surface indications do not even favor that conclusion. Unless the bed should be brought to the surface by an upward turn of the contorted strata on the south side of this range of hills, there is no possibility of getting at it. Mr. McGlauchren intends to try, if possible, to open a quarry, with a view to ascertain more satisfactorily the extent and quality of this material.

On the whole, in its present situation, this marble seems worthless for the present purpose.

During the examination of structures and monuments of Baltimore marble, both in Green Mount cemetery and in the city of Baltimore, with a view to ascertain the durability and facility of working this material, I was so much struck with the beauty of some of the granite vaults and fronts of buildings that I determined to visit the quarries from whence this material was procured, more especially as the owner, Mr. Green, informed me that he was confident he could furnish it at a cheaper rate than the white marble could possibly be supplied, and as it was only two miles out of my way in returning from the Point of Rocks.

Accordingly, I stopped at Woodstock, 16 miles beyond the Relay House, and inspected carefully the Waterville branch and the Fox rock quarries in this vicinity; both of which are well opened, and afford a good opportunity of judging the quality and extent of this formation.

For about a mile square at this locality is an outburst of quartzose granite of magnificent quality, both as regards beauty of appearance, compactness of structure, and uniformity of color, texture, and composition. I have never seen anything superior in this country; indeed, I doubt whether it can be excelled in any country. The proportion of felspar and mica is very small. The former is only in minute specks, the latter in small black scales, whilst the great bulk of the rock is a vitreous quartz.

In consequence of the mica being only in small regular disseminated flakes, it imparts to the rock an agreeable light gray, well adapted, in my judgment, to the Norman style of architecture.

In consequence of the composition and texture of this granite, it must possess a durability not to be surpassed by any building-material. For the same reason, it must be difficult and expensive to cut; but in consequence of the precision with which it splits, not only in the lines of cleavage, but even across the grain, it may possibly be furnished in competition with marble.

To give some idea of the remarkable facility with which the granite in question cleaves, I may state the following facts, which came under my observation: A slab twenty feet long and one foot square was split longitudinally into two, nearly as accurately as if it had been sawed.

Again, I observed two slabs—one measuring thirteen feet long, four feet six inches broad, and two feet thick; the other eleven feet long, six feet broad, and two feet thick—which were split in two, so as to form slabs of the same dimensions in length and breadth, but only one foot thick; and so perfect were the faces of cleavage, that they did not deviate one inch from a true level surface.

So confident are the quarrymen of the certainty of splitting this granite in any required direction, when even of no greater thickness than nine inches or a foot, that they will, for the sake of having weight and substance in the block to retain it in its position while under the hammer and chisel, first dress the two outside faces, and trust to splitting the slab or block in two.

Fully to appreciate the quality of this granite, the quarries themselves must be visited, and the huge blocks in mass inspected as they are removed from their original bed. There, one may see a perpendicular face of nineteen feet presented to view, extending twenty, thirty, and even forty or fifty feet, without a seam or flaw, or the slightest variation in hue. A mass of forty or fifty tons weight may often be seen severed from the parent rock, by the simple but efficient means of small iron wedges.

On some slabs, by close inspection with the magnifying glass, a few minute specks of iron pyrites may be seen; but none were observed visible to the naked eye.

Mr. Green thinks nearly one-third of the freight may be saved by bringing the rock to its proper dimensions at the quarry.

This granite does not spaul freely; but, in consequence of the facility with which it splits, but little spauling is required.

From the bottom of the Waterville branch quarry to the summit of the outburst is forty feet, by barometrical measurement.

The Fox rock quarry is thirty-six feet from top to bottom, where now excavated. It might be worked some fifteen or twenty feet lower before being incommoded by water. Mortar adheres with such force to this granite, that, when fairly set, it requires as much force to separate the substance of the granite as to detach the mortar from the face.

On the whole, the inspection of these granite quarries has impressed me with the belief that no locality can furnish a superior quality of granite, and that it cannot be surpassed for strength and durability by any building-material in the world.

The stonecutters' bill in granite will, I fear, run up very high, on account of its great hardness; but, if the expense be not an objection, I do not think that there will be any practical difficulty in rendering in granite ornamental work so little elaborate as that of the Norman style.

An objection to the use of granite for the Smithsonian building deserves serious consideration. It is, that in this material the effect of light and shade is in a great measure lost; while every projecting ornament in the marble is marked by a distinct shadow. How far this may injure the general effect under the plan adopted, the committee will judge. Results of considerable practical importance may be obtained by an accurate chemical analysis, chiefly with reference to the proportion of silica, alumina, magnesia, and iron, affecting the durability, discoloration, and expense of working. Time, however, did not permit this investigation.

All of which is respectfully submitted.

DAVID DALE OWEN.

Washington, *March* 11, 1847.

List of specimens referred to in the foregoing report.

No. 1 Robinson and Fell's quarry.
1*a* Robinson and Fell's lower layer, close to Cold Spring creek.
2 Griscom and Borrough's quarry.
2*a* Griscom and Borrough's top layer, banded with light gray.
2*ab* Griscom and Borrough's fine grained, in nests.
3 Symington's quarry, large-crystalled marble.
3*a* Symington's quarry, sample of large blocks.
4 Fell and Robinson's quarry, blue variety.
5 Mrs. Taylor's quarry.
5*a* Mrs. Taylor's quarry, crumbling layer.
5*b* Mrs. Taylor's quarry, (see specimen with dark color on long exposed surface.)
5*c* Mrs. Taylor's quarry, banded with gray stripes.
5*d* Chisilla Owens's quarry, fissured.
6 Chisilla Owens's quarry.
7 Worthington's (old) quarry.
8 Baker and Conly's quarry.
10 Worthington's (new) quarry.
10*w* Worthington's, white variety.
10*bl* Worthington's, blue variety.
11 Cooper's quarry, with veins of mica.
12 Judge Nesbitt's quarry.
13 Cockey's quarry, compact white.
14 Mica slate, with garnets.
15 Point of Rocks quarry, Mr. McGlauchren's.
16 Chloritic schist, Point of Rocks.
17 Granite, Waterville branch quarry, near Woodstock.
17*a* Granite, Fox rock quarry, near Woodstock.
18 Granite, Fox rock quarry, near Woodstock.

Laid on the table.

On motion of Mr. Seaton, it was

Resolved, That Dr. Owen be requested to analyze the specimens of white marble, especially Mr. Worthington's and Mr. Symington's, and report thereon.

The chairman laid before the committee letters recommending Mr. Richard C. Murry as superintendent.

Laid on the table.

The chairman laid before the committee a letter from Mr. John C. Rives, recommending Mr. Jones, of Washington city, as bricklayer.

Laid on the table.

The chairman laid before the committee a letter from Mr. Isaiah Lukins, of Philadelphia, relative to a town clock.

Laid on the table.

And, on motion, the committee adjourned.

SIXTH MEETING—March 13, 1847.

Present, Messrs. Seaton, Owen, and Hough.

On motion of the chairman, it was

Resolved, That Mr. Peter Gorman be requested to procure from Bull run quarry four perch of light gray freestone, to be delivered on the canal, opposite Eighth street, and be put up under the supervision of the architect—one half in broken rubble masonry, the other in range work—finished exactly in the manner in which the said architect recommends; that the above styles, if adopted, should respectively be finished, so as to supply a sample wall, to which, if the above material be adopted, reference may be had in the contract.

Mr. Seaton submitted a letter from I. Mudd, offering his services as superintendent; also, a letter from A. B. McFarlan, regarding the specimen walls and Seneca freestone; also, from the same, a draught of the quarries in the vicinity of Seneca creek; also, from the mayor of Baltimore, and Mr. Long, architect, of that city, recommending Mr. Richard C. Murry as superintendent;* also, from Mr. M. W. Carter, of Fredericksburg, recommending Seneca freestone, and offering his services; also from Mr. John T. Bryant, recommending to purchase one of Mr. Lukins's clocks, Philadelphia; which letters, on motion, were

Laid on the table.

And, on motion, the committee adjourned.

SEVENTH MEETING—March 15, 1847.

Present, Messrs. Seaton, Hough, and Owen.

Mr. Seaton submitted a letter from Robert Barnard, offering his services as treasurer and accountant.

Laid on the table.

The chairman submitted a letter from Governor Francis Thomas, of Maryland, asking an additional examination of the quarry at Point of Rocks, heretofore examined by Dr. Owen.

Laid on the table.

The chairman submitted from Mr. Samuel Worthington the following offer to supply marble for the Smithsonian building:

Baltimore County, *March* 13, 1847.

Gentlemen: I will agree to furnish the necessary white marble for the erection of the above institution—say five thousand perch of rubble stone of the size of good building-stone, carefully broken, and placed upon the cars at Cockeysville—at the rate of one dollar and eighty-seven cents per perch of twenty-five feet; or, at one dollar and twenty cents per ton, as weighed by the railroad.

I will agree also to furnish the dimension-stone in the block, and no block to contain less than two cubic feet, at the rate of sixty cents per cubic foot, and placed on the cars at the above-mentioned place; or, by the ton, at six dollars per ton as taken from the quarry, if the stone should be wrought at the quarry, and the carved work completed there; then, an addition of fifty cents per ton will be charged on all stone so worked, to be delivered say in the course of three years, or as may be required.

Very respectfully, your obedient servant,

SAM'L WORTHINGTON.

Messrs. Robert Dale Owen, and others,
Building Committee Smithsonian Institution.

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* Note.—March 16, letters and application withdrawn.

Mr. Hough, from the sub-committee to whom were referred the specifications of the architect, (James Renwick, jr.,) for the building for said institution, made the following report:

To the Building Committee of the Smithsonian Institution:

Gentlemen: I have carefully examined the specifications of the architect, (James Renwick, jr., esq.,) for the building of said institution, and find them elaborately and minutely drawn, both in reference to detail of the work and permanence and durability of the structure. Few, if any, omissions can be discovered, and but few alterations seem to be required for the permanence and durability of the edifice, or for its better security against destruction by fire.

It has been suggested by one of the committee, that the width and depth of the foundation trenches, and, as a consequence, the foundation walls, might with safety be diminished, the inverted arches and the concrete foundations be entirely dispensed with, and consequently with a considerable saving of expense.

In such a conclusion I cannot, without further information, concur.

Whether its foundation trenches may or may not be diminished in depth, will, in my opinion, depend upon the peculiar formation or strata of the earth, which can only be determined by making the necessary borings or excavations.

If, upon experiment, the strata shall be found to consist of firm indurated clay or gravel of sufficient depth for permanence, the depth may be diminished; otherwise, not.

But in no event could I recommend a diminution of width; nor would I dispense with either the inverted arches or the concrete foundation; deeming both very essential in preventing an unequal settlement and cracking of the walls of the edifice. I consider the concrete much better adapted to permanence of foundation than any ordinary structure of rock alone, and in no respect more expensive; and, in so ponderous a structure, all architects and constructors of experience concur in recommending inverted arches to preserve a uniformity of settling between the openings and solids of the building. I would, however, recommend a reservation in the contract for the construction of the building, of the right to diminish the depth of the foundations, with a pro rata reduction of price in case the strata or character of the earth shall be found to admit of it in the opinion of the architect. It may be found, also, that the thickness of the walls of some of the towers, and perhaps the walls of the buildings throughout, may with safety be diminished; and I would recommend a like reservation in the contract to meet this contingency also.

The idea of constructing the principal stairs in such an edifice with wood, does not, in my estimation, well comport with public opinion, either as to permanence, durability, and appearance, or with the character of the age in which the edifice is to be erected.

I recommend, therefore, without hesitation, if the funds will possibly admit of it, that the principal stairs of both the north and south central entrances to the principal building be constructed of stone, as high, at least, as the museum floor.

I also recommend that the wood tesselated floor of the museum be dispensed with, and that, instead thereof, there be a single floor of 1¼-inch yellow pine plank, with the intention of covering it with stone or composition flagging at a future day; or, what I would deem preferable, dispense with the wood floor altogether at first, and raise the deafening above so as to cover the floor beams, upon which lay a floor of stone flagging. This it is believed may be done at a small expense over the wood Mosaic, be greatly more secure against fire, and require much less expense in cleaning and repairs.

I would also recommend as a security against fire, in case of the burning of the roof, that a rough floor be laid upon the beams above the upper ceiling, next to the roof, throughout the building, and covered with a suitable thickness of lime-water cement; over which, when dried, a covering of common salt, or a cement of salt and ashes, be evenly spread, carefully filling all the cracks or crevices of the cement.

This is the French method of fire-proofing the upper part of buildings, and has been to some extent adopted in some sections of this country with entire success. This would be attended with comparatively little expense, and would, it is believed, render the body of the building entirely secure against destruction by fire in case the roof should be burnt.

All of which is respectfully submitted.

WM. J. HOUGH.

Washington, *March* 15, 1847.

On motion of Mr. Seaton, it was

Resolved, That Mr. Hough be requested to examine into the expediency of dispensing with any portion of ornamental stucco in the building.

The chairman submitted from Dr. Owen the following

Report on the sandstones of the Potomac.

After completing the report of the white marbles and granite of Baltimore county, Maryland, I proceeded, according to instructions, on the afternoon of the 11th of March, to inspect the quarries of sandstone in the neighborhood of Seneca creek, Montgomery county, Maryland.

About 21½ miles from Washington city, on the line of the Chesapeake and Ohio canal, the talcose and chloritic schists of the Great falls of the Potomac are succeeded by freestone and marly beds of the new red sandstone formation. These deposites are of various colors, from a light greenish-gray, or dove-color, to a deep red or brown.

The first quarry visited is situated on Bull run, 23 miles from Washington. The excavations have hitherto been carried on from 250 to 300 yards on the north side of the canal; but the ledges of rock extend down to its margin, and can be quarried with nearly as much facility a few paces from the canal as where operations are now carried on.

The dip of the stratification slopes at an angle of 15° or 20° upwards from Bull run. The beds, suitable, both as regards color, durability, and ease with which they can be cut, are fortunately near the surface in the ravine of Bull run. By commencing quarrying operations near the bed of this stream, and working up the western slope, blocks of large dimensions can be obtained with comparatively little labor. The beds which have been chiefly worked here are layers of a deep red color, (see specimen No. 18,) and layers of a purplish-gray, (No. 19,) which, by exposure, acquire a lighter and more pinky hue. The latter is the rock most suitable for building purposes, its color being agreeable, and, in the opinion of men of good judgment and taste, appropriate for the Norman style of architecture. This rock possesses one property in particular which recommends it to the attention of builders. When first removed from the parent bed, it is comparatively soft, working freely before the chisel and hammer, and can even be cut with a knife: by exposure, it gradually indurates, and ultimately acquires a toughness and consistency that not only enables it to resist atmospheric vicissitudes, but even the most severe mechanical wear and tear. Abundant evidence of this is afforded in the buildings of the neighborhood, in several of the locks and aqueducts, and also in ledges and blocks exposed in the bed of Bull run. The deep red varieties have been chiefly used in these structures. By close inspection of slabs exposed now 20 years to atmospheric agencies and severe mechanical friction, the mark of the dressing-chisel is still sharply imprinted in the surface. On the perpendicular wall of the aqueduct, where the water has been oozing through the joints and trickling down its face, forming an incrustation of carbonate of lime, one may observe, where this calcareous crust has scaled off, the grooves and ridges of the surface still nearly as distinct as when the block first came from the hand of the stonecutter.

The angles and edges of the keystones of the arch, placed under these most unfavorable circumstances, are sharp and entire. Only one or two blocks of this work of 20 years' standing show signs of decay; but these seem to be such as either have not been well selected, or have been placed on the edge in the wall.

Even the tow-path of this aqueduct, over which the horses and mules have been travelling for 20 years, is still unimpaired. Even the corners around which the heavy lock-gates swing, show no signs of chipping. Blocks were pointed out to me in the bed of Bull run, which had been rejected by the engineers as being of too soft and perishable a nature, and which have been exposed for 20 years to the action of running water and alternate thawing and freezing, which exhibit little or no alteration, except that they have become so indurated that they turn the edge of the chisel, and are a little dingy on the surface.

Mr. Peter, on whose property this quarry is situated, has built a fine barn of these freestones. He assures me that there are stones in that barn 50 years old, which have been in three buildings. On one cornerstone, where the figures "1824" had been cut in that year *by the point of a penknife*, the rock now is so hard that it would soon turn the edge of a well-tempered tool.

Interstratified with these grit-stones are some argillaceous, marly-looking beds, (No. 20,) especially prevalent towards the upper outcrop of the stratified mass constituting these hills. These layers are, of course, entirely unfit for any kind of building purposes. The sandstone beds differ very much, not only in color, but also in hardness and texture. Some are fine-grained, and can be wrought to a sharp arris; others are coarse-grained, and even assume the character of a conglomerate: these latter, of course, are entirely unfit for the finer purposes of architecture. Amongst a series varying so much, not only in color, but in texture and composition, a careful selection becomes a matter of the utmost importance.

About a quarter of a mile further west, in a bold escarpment of 20 or 30 feet in height, close to the margin of the canal, is the "College quarry." Here the strata assume a somewhat different character. Above, they are of a crumbling, argillaceous, marly nature, producing a retentive soil, well adapted for the growth of wheat and corn; beneath these disintegrating beds are red and rather argillaceous freestones of an inferior quality, which pass downwards into light greenish-gray beds, varying from a foot to two or two and a half feet in thickness.

At about fifteen feet from the top is the most important bed exposed in the quarry, of a greenish-gray hue, usually called the "dove-colored bed;" see specimen No. 21. Beneath this, as far as can be ascertained from the rubbish strewed over the lower face of the quarry, are brown and bluish-purple beds, (No. 22,) of inferior quality. Here, as at Bull run, the strata dip to the west at an angle of about 15° or 20°; so that the middle layers crop out towards the summit of the hill. Near the top the dove-colored bed is two feet thick. Sixty feet down the slope of dip it has increased to four feet; forty-five feet more, it is six feet; and fifty-four feet more, it is nine feet thick. At the same rate of increase to the west, beyond where it is exposed to near the level of the canal, it would be twelve to thirteen feet. The color of this bed is rather cold, but it is much admired by some persons. It is faintly striped parallel to the stratification, (see 21*a*); it has also some small faint spots, or "pock," as the stonemasons call it, (see 21*a*), not quite so hard as the body of the rock. This stratum is not near so easily worked as the best beds in Bull run quarry; indeed it is harder to work than marble. If this dove-colored bed is worked extensively, there will be considerable expense incurred in stripping, since there are fifteen feet of solid strata overlaying it.

A few hundred yards west of this is another quarry, equally bold, and composed of similar beds, their tints being for the most part gray, greenish-gray, and dove-colored.

Beyond this, along the canal, the ground is flat and wet, and the hills recede towards the north, so that to the west of the last described quarry, for fifteen or twenty miles, building-material cannot be procured so convenient to navigation.

Between the College quarry and Bull run there are several localities close to the canal, where some rock has been quarried. The beds exposed are of warm red tints, similar to the red sandstones in Bull run. At these quarries, and in Bull run, the material for the construction of the aqueduct and locks in this part of the Ohio and Chesapeake canal were obtained. These works have stood the test of time as well, if not better, than any of the other structures along the whole line of this improvement.

The investigations in the vicinity of Seneca creek prove conclusively that the bluffs on the banks of the canals, for about three-quarters of a mile, afford abundance of freestone for building purposes, equal and even superior to those which are obtained in the quarries of New Jersey, which supply the New York market.

If this freestone should ultimately become the choice of the building committee of the Smithsonian institution, a very careful selection will be necessary not only as regards the particular color preferred, but that it be those softer varieties of pure grit-stone, free from all argillaceous or marly admixture, and containing none of those "pock" marks, or small spots and cavities, which not only injure its appearance, but detract from its otherwise durable nature. They must also, to insure durability, be in all cases laid on the bed as in the natural position in the quarry.

The singular property which the best quality of these freestones possesses, of hardening by exposure, is one of its most valuable characteristics; permitting it to be wrought at less expense than marble, and imparting to it a durability which increases with age. It has been a question, whether this property is due to iron in its composition, passing from a lower to a higher degree of oxidation, or to the presence of a sub-carbonate of lime, becoming gradually by exposure a carbonate of lime, and acting as a cement to the particles of silex. A minute chemical analysis would no doubt throw light on this matter. It might prove that this phenomenon depends on some other property not yet suggested.

This same property of hardening by exposure is possessed in a remarkable degree by a building-stone which has been excavated for centuries from St. Peter's mountain, in the vicinity of Maestrich, in Belgium, and which is the terminating member of the cretaceous formation of the Mesozoic period. This rock is a calcareous freestone, and is generally supposed to owe its hardening property to a chemical change which takes place in the calcareous cement. The Seneca freestone, however, does not effervesce in mass with acid; and this fact militates against the idea of its indurating property being due to any peculiar form of carbonate of lime.

In concluding this report, it may not be out of place briefly to advert to two letters which I addressed from Indiana, under date the 22d and 25th of October last, to one of your committee, (the Hon. Wm. J. Hough,) on the subject of the sandstones of the Potomac, which at that time I had not seen. In these letters, (judging from the fact shown from a geological map in my possession, that the red sandstone formation which furnishes highly-prized building-material in New Jersey and Pennsylvania passes thence to the southward, and crosses the Potomac at Noland's ferry, descending that river on the Maryland side and crossing Monocacy and Seneca creeks,) I took the liberty of suggesting the importance of a careful examination of these localities, before selection was made of a more distant and expensive building-material. Mr. Hough will recollect that the second of these letters contains the following paragraph: "It seems indeed strange, that, if really good and durable freestones are to be had on the canal or river above Washington, these should not already have been used for the public edifices there; but sufficient examples are to be found of the very best building-material having been overlooked through a long series of years, even in the vicinity of populous cities, for lack of minute and discriminating examination. My own firm belief is, that a durable sandstone, equal or nearly equal to that used in Trinity church, can be discovered in sufficient quantities in the vicinity of the Potomac or the canal."

It may afford some evidence of the confidence with which geological science may be appealed to in search of practical results, that an actual examination of one of the localities above designated has fully confirmed all, and more than all I had anticipated concerning the material they furnish.

I annex a rough sketch of the College and Bull run quarries, showing the dip of the strata and the shape of the escarpments along the bank of the canal, where the freestone is found.

All which is respectfully submitted.

DAVID DALE OWEN.

WASHINGTON, *March* 15, 1847.

List of specimens referred to in the foregoing report.

18. Red Potomac sandstone, Bull run, near Seneca creek, Montgomery county, Maryland.
19. Grayish-purple or pink variety of sandstone, Bull run, near Seneca creek, Montgomery county, Maryland.
20. Disintegrating argillaceous beds, College quarry, west of Bull run, Montgomery county, Maryland.
21. Dove-colored bed, College quarry, west of Bull run, Montgomery county, Maryland.

21*a*. Banded variety of 21.

22. Purple and brown beds, No. 21, College quarry, west of Bull run, Montgomery county, Maryland.

And, on motion, the committee adjourned.

EIGHTH MEETING—MARCH 16, 1847.

Present, Messrs. Seaton, Hough, and Owen.

The chairman laid before the committee the following letter:

WASHINGTON, *March* 15, 1847.

The subscriber will furnish all the stone necessary for the cutting for the Smithsonian Institution upon the dock at Washington, for the following prices:

For East Chester marble, such as the Post Office Department is built of, for the sum of seventy-five cents per cubic foot.

Mount Pleasant or Sing Sing marble, from the Mount Pleasant prison, for the sum of fifty-five cents per cubic foot.

JAMES HALL,
Westchester County, New York.

Hon. ROBERT DALE OWEN.
WM. J. HOUGH.
W. W. SEATON.

P. S.—I will name Horace Butler and James Foster, both of the city of New York, as security for the faithful performance of the above.

JAMES HALL.

The chairman laid before the committee the following letter:

BALTIMORE, *March* 15, 1847.

We, the undersigned, do hereby agree to deliver to the committee of said institution white crystallized marble for rubble work, on the cars at the quarry, in pieces weighing from 75 to 3,000 lbs. each, at $2 20 for 3,000 lbs.; it being considered equal to one perch of stone.

If the range work should be adopted, we will agree to deliver the stone, as per specification of 8 in bed, at the building in Washington, at 50 cents per superficial foot.

We will also agree to furnish the dimension-stone, delivered at the building in Washington, at 53 cents per cubic foot for stone not exceeding 1,000 lbs. in weight; from 1,000 to 2,000 lbs., 57 cents; from 2,000 to 3,000 lbs., 65 cents; and from 3,000 to 4,000 lbs., 72 cents per cubic foot.

We name M. S. and J. T. for our security.

Respectfully,

GRISCOM & BORROUGH.

To the BUILDING COMMITTEE
of the Smithsonian Institution.

P. S.—We should like to furnish the lime for the building, also, and would deliver it at a reasonable price.

G. & B.

The chairman laid before the committee the following letter:

BALTIMORE, *March* 15, 1847.

We will agree to deliver to the committee crystallized *marble* in *blocks*, for *rubble work*, weighing from 100 to 300 lbs. each, on the car at the quarry, at $2 for 3,000 lbs., this amount to be considered equal to a perch of *stone*; and should the *range work* be adopted, with 8 to 10-inch bed, then we will agree to deliver stone at 49 cents per superficial foot at the *building*; and for *dimension-stone*, not exceeding 1,000 lbs., 50 cents per *cubic foot*; and from 1,000 to 2.000 lbs., 53 cents; 2,000 to 3,000 lbs., 55 cents; and all other stone, from 3,000 to 5,000 lbs., 60 cents. And we would also wish to contract for the lime, and name for our securities C. C. A. and J. S. S.

Very respectfully,

FELL & ROBINSON.

To the COMMITTEE
of the Smithsonian Institution.

The chairman laid before the committee the following letter:

WASHINGTON, *March* 15, 1847.

I propose to sell to the building committee of the Smithsonian Institution the right to quarry such stone as they or their agent may select in my quarry, at the rate of fifty cents per perch. My quarry is situate immediately upon the Baltimore and Susquehanna railroad.

The stone can be placed upon the cars from the quarry with very little labor. The distance from Baltimore per railroad is 15 miles.

E. J. COOPER,
79 *South High Street, Baltimore.*

The chairman laid before the committee the following letter:

BALTIMORE, *March* 15, 1847.

GENTLEMEN: We propose to furnish from the Fox Rock granite and Waterville quarries, in Baltimore county, stone for building the Smithsonian Institution, of the same color and quality as that used in the rear of the General Post Office, at the following prices:

The rough rubble stone, delivered at the depot in Washington city, at 16 cents per foot.

The dimension-stone, for fine work, at 46 cents per cubic foot.

The split ashlar, in place of the rough rubble stone, we will furnish at $37\frac{1}{2}$ cents per foot.

The above prices are estimated, provided the price of freight on the railroad is reduced to $2\frac{1}{2}$ cents per ton per mile.

All of which is respectfully submitted.

SUMWALS, GREEN, & CO.

Hon. Robert Dale Owen,
Wm. J. Hough,
W. W. Seaton,
Committee.

The chairman laid before the committee the following letter:

Washington City, *March* 15, 1847.

Gentlemen: I propose to deliver what lime may be wanted in the erection and finishing of the Smithsonian Institution, in this city, at forty cents per bushel.

The lime shall be burnt from the best alum stone, with wood, and shall be warranted of the first quality.

I will guaranty that two bushels and a peck shall be sufficient for laying a thousand brick, provided proper sand is used.

E. J. COOPER,
79 South High Street, Baltimore.

The chairman laid before the committee the following letter:

Washington City, *March* 15, 1847.

The undersigned proposes to furnish the white pine and yellow pine necessary for the Smithsonian Institution at the following prices:

200,000 b. m. white pine timber, at $23.
75,000 $\frac{5}{4}$ b. m. yellow pine narrow boards, in the rough, at $26 50.
75,000 $\frac{5}{4}$ b. m. ditto, dressed, tongued and grooved, at $37.
25,000 b. m. white pine plank, at $30.
Common cullings, at $14.

The above to be delivered here free of charge, and in such quantities as may be ordered, from time to time.

JOHN PURDY.

The chairman laid before the committee the following letter:

March 7, 1847.

Sir: I have seen, from the proposals for the construction of the institution, that stone from the upper Potomac may be used in the building. I will take leave to inform you that I have quarries of the red sandstone within a short distance of boat navigation, from which were constructed the aqueduct and locks at and below the mouth of Seneca. The quarry will either be sold, or otherwise, as may best suit the views of the parties. I shall be pleased to have a call before engagements be entered into, for the purpose of inspection,

Respectfully,

CHARLES VINSON,
Near Seneca Mills.

To the CONTRACTOR
on the Smithsonian Institution.

The chairman laid before the committee the following letter:

WASHINGTON, *March* 15, 1847.

GENTLEMEN: I will furnish bricks, lime, cement, and sand, and lay the same, for fourteen dollars and seventy-five cents per thousand. The materials shall be of the best quality, and the workmanship done in the best manner; and will give for securities for the peformance of the same, John C. Rives and Wm. H. Gunnell, esquires.

Yours, &c.,

ZEPHANIAH JONES.

To the BUILDING COMMITTEE
of the Smithsonian Institution.

The chairman laid before the committee the following letter:

WASHINGTON CITY, *March* 15, 1847.

I hereby propose to furnish the material and lay one million bricks, according to plan and specification, for the sum of eleven thousand five hundred dollars.

Yours, very respectfully,

J. RAY.

The chairman laid before the committee the following letter:

WASHINGTON, *March* 15, 1847.

GENTLEMEN: The undersigned proposes to furnish and lay all the bricks that may be required about the Smithsonian Institution, to wit:

In the walls, per thousand, measured, nine dollars and sixty-two and a half cents.

Or, per cubic foot, fourteen and the fourth of a cent.

All the bricks to be hard; lime of the best Potomac stone; sand clean and sharp.

If these amounts satisfy the honorable committee and the architect, then it is time, I hope, (in my opinion,) to furnish a security, or retain a per centage on a certain amount of money, for the faithful compliance with this bid.

Yours, with respect,

THOMAS LEWIS.

To the BUILDING COMMITTEE
of the Smithsonian Institution.

The chairman laid before the committee the following letter:

WASHINGTON, *March* 15, 1847.

I propose to furnish one million of the best hard brick, for the Smithsonian Institution, at four dollars and ninety three cents per thousand.

I propose to furnish the best hard brick for 175,000 cubic feet of backing, at four dollars and ninety-three cents per thousand.

E. KINGMAN.

Hon. R. D. OWEN,
W. J. HOUGH,
W. W. SEATON,
Building Committee of the Smithsonian Institution.

I offer Messrs. Tyson and Brickley as my securities for the performance of the contract.

E. K.

The chairman laid before the committee the following letter:

Proposals to deliver to the building committee of the Smithsonian Institution, at the site of their building in Washington, white marble in the rubble, and in the range and cube form.

For every perch of 3,100 lbs., in such shape as will facilitate the preparation by the mason, and in sizes of 70 to 300 lbs., $4 60.

For range work, with split faces, bedded to make a joint not over half an inch, and roughly pitched off to a line in courses of 10 to 18 inches, per superficial foot, measured face only, 47 cents.

For marble in the cube form, quarried as near the size wanted as practicable, per cubic foot, (large crystal,) 50 cents.

Medium crystal from my quarry, 62½ cents.

Fine crystal from my Owens quarry, in small blocks for foliage work, 70 cents.

My bondsmen are John W. Brown and Wm. Baily, esquires, of Baltimore.

THOS. SYMINGTON.

WASHINGTON CITY, *March* 15, 1847.

The chairman laid before the committee the following letter:

Proposals by George Crist, of New Cumberland, Pennsylvania, by his agent, Thomas Symington, of Baltimore, to deliver in Washington city, for the building of the Smithsonian Institution, white pine sawed timber, viz:

For all white pine sawed timber, to diminution size, out of good sound logs, delivered in Washington city, on the landing, per 1,000 feet (board measure) $18.

[NOTE.—In case the freight from Havre-de-Grace is less than three dollars per M., a corresponding reduction will be made. In all cases the building committee are required to pay the captains the freight from Havre-de-Grace to Washington city. The said freight will be as part payment for the lumber.]

Mr. Crist is proprietor of one of the largest saw-mills on the Susquehanna river. He is a responsible man, and has directed me to say that he will give the necessary bonds, either from his own neighborhood or from Baltimore.

He further states, that he would like to deliver the whole quantity during the ensuing season. If desirable, a sample of his lumber can be seen at the U. S. arsenal, Greenleaf's point, delivered there some two or three years ago.

THOS. SYMINGTON.

BALTIMORE, *March* 15, 1847.

The chairman laid before the committee the following letter:

Proposals to deliver to the building committee of the Smithsonian Institution, at the site of their building in Washington city, white marble ashlar.

For ashlar with horizontal pointed face, as sample No. 3, in the basement of the City Hall, 6 inches bed, per superficial foot, measured face only, 49 cents.

For ditto, averaging eight inches bed, 63 cents.

For ditto, machine-dressed face, as sample No. 4, averaging 6 inches bed, 49 cents.

For ditto, averaging 8 inches bed, 63 cents.

For split ashlar, in range courses of 10 to 18 inches, from my Owens quarry, from whence sample No. 4 was procured, bedded, so as to make a joint not over half an inch, average 6 inches bed per superficial foot, measured face only, 40 cents; and to have a draught cut all round the edges on the face.

For ditto, as above, averaging 8 inches bed, per superficial foot, face only, 49 cents.

I name the following gentlemen as my bondsmen, viz: John W Brown and William Baily, esqs., of Baltimore.

THOS. SYMINGTON.

WASHINGTON CITY, *March* 15, 1847.

The chairman laid before the committee the following letter:

Proposals for cutting marble for the buildings of the Smithsonian Institution, the marble to be that which is procured from the large or medium crystal quarries near Baltimore.

FOR CUTTING.

Steps, if square, worked fine, square droved or rubbed, per superficial foot, 35 cents.

If worked with the tooth chisel, (as sample No. 2, deposited in the sample room,) per superficial foot, 25 cents.

Measure length by girth; if the ends show, add thickness to length.

Water-table, splayed, without members, fine cut or rubbed, per superficial foot, 40 cents.

If tooth-chiselled, 30 cents.

If moulded, add ten cents per superficial foot lineal for each member; measure length by girth from wall to wall.

Plain ashlar, fine cut or rubbed, per superficial foot, 35 cents.
Tooth chiseled, 25 cents.
Measure face only.

Plinth and base course of all the door and window jambs and mullions:

Fine cut and rubbed, per superficial foot, $1 50.
Tooth-chiselled, $1 10.

Measure the height of course for the length; and for the girth, girt from where the course joins the ashlar in front, around the bases, to where the fine work ceases.

[Note.—If any foliage is to be cut upon any of the bases, an extra price will be charged for the foliage; to be determined by the architect. The general rule to be observed, in all such cases, will be to allow the contractor a fair per centage over the operator's charge for the said work.]

Doors and window jambs, arches and mullions:

If plain splayed, fine cut, and rubbed, per superficial foot, 40 cents.
Tooth-chiselled, 30 cents.

Measured length, by girth from ashlar in front, to casing; for the circle or arch, add one half measure.

If moulded with one or more rebats and columns, fine cut, or rubbed, per superficial foot, $1 10.

Tooth-chiselled, per superficial foot, 80 cents.

Measure the height of each course for the length; and for the girth, girt from the ashlar in front around the mouldings to the casing in the rear; add for the arch a half measure.

[Note.—If any of the members are to receive a cable cord, zig-zag, or other device, which must be worked upon the member after it shall have been finished, for the price per lineal foot of such device apply rule No. 1.]

Foliage caps:

For engaged columns of 5 inches diameter and under, finely cut, and rubbed, each $4.

Rough cut, each $2.

[Note.—The course on which they are cut will be measured, and charged as a portion of the door or window jamb.]

Foliage caps, moderately plain:

For disengaged columns of 5-inch diameter and under, finely cut, and rubbed, each $10.

Roughly cut, $6.

For disengaged columns of 12-inch and under, finely cut, and rubbed, each $35.

Roughly cut, each $20.

Circular label mouldings over doors and windows:

If not over 12 inches girth, finely cut, per lineal foot, $1 10.
Tooth-chiselled, 80 cents.

[Note.—The stones on which it is cut are measured and charged according to their class.]

Foliage drops, brackets, or modellions' buttresses, (apply rule No. 1:)

If finely cut, or rubbed, per superficial foot, 40 cents.
Tooth-chiselled, 30 cents.
Measured as ashlar.
Buttress caps, plain splayed, finely cut, per lineal foot, 40 cents.
Tooth-chiselled, 30 cents.
Moulded, per foot lineal, finely cut, etc , 80 cents.
Tooth-chiselled, 65 cents.
Measured along the eave.

[NOTE.—The course on which the cap is cut is measured and charged according to its class.]

Corbel courses:

(Such as the one that extends around three sides of the north front porch, which is 3¼ feet high. The upper course as plain ashlar; the lower course, measure face and bed, and priced as ashlar.)

For sinking the arches, each finely cut, $3 50.
Tooth-chiselled, $2 50.
For sinking arches of less size, in proportion.

Label mould, with octagon front, over corbel courses:

Per superficial foot, finely cut, or rubbed, 45 cents.
Tooth-chiselled, 35 cents.
Measure length by girth of what shows.

Hook label, or similar moulded courses:

Per superficial foot, finely cut, $1 10.
Tooth chiselled, 80 cents.
Measured length by girth of what shows.

Battlements over front porch, and all similar work:

Per superficial foot, finely cut, 35 cents.
Tooth-chiselled, 25 cents.
Measure as ashlar.

Battlements, cap or coping, if plain or splayed:

Same as plain octagon label course.
If moulded, according to its class.

Window sills:

Splayed, per superficial foot, finely cut, and rubbed, 45 cents.
Tooth-chiselled, 35 cents.

[NOTE.—If part of the plinths of the window jambs or mullions are worked upon the splay, or if a check is sunk in the splay, to receive the sill, for the plinth or check apply rule No. 1.]

Circular windows:

The arch jamb, the same as their class. For the mullions, caps, and plinth, the same as their class; for the centre piece and tracery, apply rule No. 1.

Interlaced arches, the columns, caps, &c.:

For the interlaced arching, apply rule No. 1.
For the columns, caps, and bases, measure and charge as their class.

Cornice or coping:

Octagonal face, finely cut, and rubbed, per superficial foot, 40 cents.
Tooth-chiselled, 30 cents.
If moulded, according to its class.
Measure top bed and girth of face.

Finials: apply rule No. 1.

Corbel course, or central front tower, and all such:

Each course according to its class.
For the band or panelled course, apply rule No. 1.

Sill course of semicircle and fillet, and 5 sides of octagon:

Finely cut, and rubbed, per superficial foot, 80 cents.
Tooth-chiselled, 70 cents.
Measure length by girth of what shows.

Panelled arcade: apply rule No. 1.

Pinnacles on principal tower:

Finely cut, and rubbed, each $240 68.
Tooth-chiselled, each $208.

Flagging:

Square marble tile, 2½ inches thick, and 12 to 24 inches square, of two colors, delivered at the building ready for laying, per superficial foot, 35 cents.

Marble tile:

1¼ inch thick, and 4 to 6 inches of two or more colors, per superficial foot, delivered ready for laying, 50 cents.

1¼ inch thick, and 11 to 12 inches square, delivered and ready for laying, per superficial foot, 35 cents.

The aforegoing list of articles and prices will embrace all the kinds of cut marble work about the building. I will comply with the printed specifications, (subject to the foregoing rule,) and all requirements stated in the advertisements for proposals.

My bondsmen are John W. Brown and William Baily, esqs., of Baltimore.

Dowels and clamp holes:

For every ⅝-inch hole, sunk 3 inches, 2 cents.
For every 1-inch hole, sunk 3 inches, 3 cents.
If sunk more, in proportion.

THOS. SYMINGTON.

BALTIMORE, *March* 13, 1847.

The chairman laid before the committee the following letter:

BALTIMORE, *March* 15, 1847.

GENTLEMEN: We propose to cut and dress all the fine work mouldings, &c., for the Smithsonian Institution, at ($3) three dollars per cubic foot. We will also build all the stone-masonry at $2 per perch, mason measurement, except the concrete under the foundations, which is not embraced in this proposal.

Respectfully submitted.

SUMWALS, GREEN & CO

Hon. ROBT. DALE OWEN,
WM. J. HOUGH,
W. W. SEATON,
Committee.

The chairman laid before the committee the following letter:

WASHINGTON, *March* 15, 1847.

GENTLEMEN: I propose to build and construct the items of the Smithsonian Institution, herein contained, in a workmanlike manner, agreeably to the plans and specifications of the architect, for the following aggregate sum, viz: Digging foundations, concrete, rough stone in foundation below the superstructure, setting the rubble-facing, and cut-stone work of all parts of the building, and back filling the same; sess-pools and flagging for the foundations of partition walls—furnishing all the materials, except the rubble-facing and cut-stone—for the sum of thirty-six thousand two hundred and fifty dollars.

NOTE.—The material for scaffolding, the brick and brick work, and the north room flagging, are not included in the above. If I furnish the iron cramps, dowels, and anchors, the price will be six cents per pound. In case range work is adopted instead of the rubble-facing, one thousand dollars will be deducted from the above.

I refer you to the following gentlemen: Charles B. Fisk, esq., chief engineer on the Chesapeake and Ohio canal; A. B. McFarlan, esq., Robert Brown, and Andrew Small, esq., of Washington city. I name for my bondsmen Mr. John Higham, of Baltimore, and Andrew Small, esq., of Washington city.

JAMES MACPHERSON.

To the BUILDING COMMITTEE
of the Smithsonian Institution.

The chairman laid before the committee the following letter:

WASHINGTON, *March* 15, 1847.

GENTLEMEN: I do hereby agree to furnish all the materials and perform the brick work of the building, according to the plan and specification agreed upon by the Regents of the said institution, for the sum of twenty thousand three hundred and fifty dollars, ($20,350.)

Or, I will furnish and lay one million of hard bricks for the sum of fifteen thousand dollars, ($15,000.)

Or, I will furnish all materials, provided all the outer walls are backed up with brick in the place of rubble stone, for the sum of thirteen dollars and forty cents per thousand, ($13 40.)

GEORGE H. PLANT.

To the BUILDING COMMITTEE
of the Smithsonian Institution.

P. S.—If my bid be accepted, I am prepared to give the security required.
G. H. P.

The chairman laid before the committee the following letter:

FREDERICK COUNTY, *March* 15, 1847.

The undersigned regrets very much that he did not see, until very recently, your proposals for bids to furnish materials for the building of the Smithsonian Institution, because he has not now time to ascertain whether the Chesapeake and Ohio Canal Company will consent to reduce the toll for transportation of marble on this canal.

Assuming that the tolls will not be reduced, he offers to furnish 110,000 feet of beautiful white marble, for rubble-facing, one foot thick, at 60 cents per foot; and 20,000 cubic feet dimension-stone, of white marble, for cutting, at 90 cents per foot. And will give as securities for the faithful execution of such a contract, Sebastian Ramsburg, John C. Osborn, John Hagan, and Joshua Dill, all of whom hold valuable real estate in, and are citizens and residents of, this county.

The undersigned is not certain whether it is expected that those who propose to furnish the materials for building above mentioned must also submit proposals for the construction of the institution, and has therefore submitted proposals for materials only. If it is the intention of the committee to have the materials furnished and this building constructed under one and the same contract, he will undertake, if time be afforded for this purpose, to form a company that will submit a proposition of that character, at an early day, and on terms that must be esteemed desirable. This is said confidently, from his knowledge of the superior quality of the marble he proposes to furnish, and from the facility with which it can be delivered at Washington.

Very respectfully, your obedient servant,

PHILIP McGAUGHEN,
Point of Rocks.

Hon. R. D. OWEN,
W. J. HOUGH,
W. W. SEATON,
Committee, Smithsonian Institution.

All of which letters were laid on the table.

The committee then, in the presence of the architect, James Renwick, jr., and of the superintendent, Robert Mills, proceeded to open the bids, and found them as by the following table:

Schedule of sealed proposals for the Smithsonian Institution, opened on the 16th day of March, 1847, by the Building Committee.

No.	Names.	Stonecutting.	Carpenter work.	Mason work.	Seneca rubble.	Seneca cut.	Marble rubble.	Marble cut.	Granite.	Furniture.
1	Charles L. Coltman	–	–	–	$278,000	–	$300,000	$318,000		
2	William H. Digges	–	$68,000	–	305,000					
3	Francis Mohun	–	88,000	–	–	–	–	–	–	$11,000
4	Joel Downer	–	51,300							
5	Bell, Packie & Co. (Ashlar ranged.)	$119,600								
6	B. B. Curran	–	65,200	–	–	–	240,000			
7	Jos. Bryan	–	74,700	–	–	–	–	–	–	9,200
8	Jas. Strang	–	–	$81,000						
9	Butler, Adams, & Cameron	79,500	144,000		–	–	223,500			
	Do do do	106,500	129,000		–	–	–	235,000		
10	James Dixon & Co.	–	–	–	196,000					
11	Gilbert Cameron	–	–	–	200,000	$203,000				
12	T. M. Niven	–	–	–	220,000	221,500	227,000	230,500		
13	Jno. Sniffen	–	63,000	–	–	–	–	–	–	20,000
	Do (tesselated floor)	–	–	1,500						
14	F. Gerard	–	–	–	214,000	219,500	225,000	230,500		

As each of the foregoing bids was opened, it was labelled "Opened March 16, 1847," each of the building committee adding his initials.

As soon as all the bids were opened and their amounts compared, a letter was prepared and addressed to six of the bidders, to wit:

1. Messrs. James Dixon & Co.
2. Butler, Adams, and Cameron.
3. T. M. Niven.
4. Gilbert Cameron.
5. F. Gerard.
6. B. B. Curran.

The letter is as follows:

Office Smithsonian Institution,
March 16, 1847.

Sir: Please to inform the building committee whether your proposals include furniture, as per specifications, or not; also, please state what are your separate estimates on mason work, carpenter's work, and stone-cutting.

Your answer by this evening at six o'clock will oblige, sir, your obedient servant,

ROBERT DALE OWEN,
Chairman Building Committee.

The letters were placed in the hands of the messenger at ¼ past one o'clock.

And, on motion, the committee adjourned.

NINTH MEETING—March 17, 1847.

Present, Messrs. Seaton, Hough, and Owen.

The chairman laid before the committee the following replies to the letter addressed yesterday to sundry bidders:

Washington, *March* 17, 1847.

Sir: In answer to your letter of this day, and in compliance therewith, I have the honor to state that my bid for the carpentry work included the furniture, in accordance with specification, as also my general bid.

My separate estimates, constituting the bid for the whole building, were—

Mason work - - - -	$80,000
Stone-cutting - - - -	94,800
Carpentry work - - - -	65,200

I would beg leave here to explain that my bid for the whole job did not contemplate the erection of the building of Seneca stone, but of white marble or granite; I should deduct $35,000 from the amount if the building committee decide upon using that kind of stone,* instead of the more beautiful, costly, and durable marble or granite.

Respectfully, yours, &c.,

B. B. CURRAN.

Hon. Robert Dale Owen,
Chairman of Building Committee.

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*This bid is for Seneca *rubble*.—R. D. O.

Gentlemen: In reply to your letter of this morning, I beg leave to answer that I did not include the furniture in my estimate; and the separate estimates from which I made up my proposition were as follows:

SENECA.

Rubble.		*Cut.*	
Cutting and stone - -	$70,000	Cutting and stone -	$70,000
Stone for face - -	5,000	Stone for face - -	16,000
Mason - - -	60,000	Mason - - -	58,500
Fire-proofing - -	12,000	Fire-proofing - -	10,000
Carpenters - -	67,000	Carpenters - -	65,000
	214,000		219,500

MARBLE.

Cutting and stone -	$75,000	Cutting and stone -	$75,000
Stone for face work -	12,000	Ashlar - - -	20,000
Mason - - -	61,000	Mason - - -	58,500
Fire-proofing - -	10,000	Fire-proofing - -	10,000
Carpenter - -	67,000	Carpenter - -	67,000
	225,000		230,500

F. GERARD.

Washington City, *March* 16, 1847.

In answering your letter that I received this morning, I beg leave to say, that in my estimate to build your job I did not make any offer for furniture, as I always thought it not included in the building proposal.

Separate bills of Seneca stone.

Mason work - - - -	$79.000,	with rubble.
Carpenter work - - - -	60,000,	do.
Stone-cutting - - - -	61,000,	do.

If you put in ashlar, you would add to the above bill $3,000—making $203,000.

I am, sir, very respectfully, &c.,

GILBERT CAMERON.

Hon. R. D. Owen.

Washington, *March* 16, 1847.

Sir: In answering yours of to-day, I have to inform you that my mason's bill is - - - - - - $50,000

Carpenter's bill - - - - -	66,000
Cut stone - - - - - -	80,000
	196,000 (rubble.)
If cut in range work, add - - - -	6,750
	202,750

If in marble (ashlar) from Symington's quarry, $228,500.
If in marble from Symington's quarry, (rubble,) $224,000.

JAMES DIXON & CO.

Hon. Robert Dale Owen.

N. B.—Furniture included in both instances.

J. D.

Washington, *March* 16, 1847.

Gentlemen: After examining Mr. Adams's papers, I have been able to discover the mistake in the bill that we hurriedly put in last night, and must express my thanks for your kindness in enabling me to correct it. The following I think is correct:

East Chester marble—furnishing and cutting marble	$79,000
Mason work with rubble	82,000
Carpenters, furnishing all	62,000
	223,000
Add ashlar to this	25,000
	248,000
Reductions on account of ashlar	17,000
	231,000

Mount Pleasant marble, ashlar	$101,725
Mason's bill	82,000
Carpenter	62,000
	245,725
Deduct	12,000
	*213,725

I hope you will excuse me for delaying you so long in waiting an answer.

GILBERT CAMERON, for BUTLER & CO.

To the Building Committee
of the Smithsonian Institution.

March 16, 1847.

Gentlemen: In answer to your circular, I would state that my estimates did *not* include furniture.

My estimates in detail were as follows:

Seneca rubble estimates.

For stone-cutting and dimension stone	$71,000
Stone for face work	7,500
Mason's bill	61,000

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* Apparent error in addition, inasmuch as $245,725 — $12,000 = $233,725.

R. D. O.

Fire-proofing	$13,000
Carpenter's bill	67,500
	220,000

For marble rubble face.

For stone-cutting and dimension-stone	$75,000
Marble rubble	14,000
Mason	61,000
Fire-proof	12,000
Carpenter	65,000
	227,000

For marble with ashlar face.

Stone-cutting and dimension	$75,000
Ashlar for face	20,500
Mason	57,500
Fire-proof	12,000
Carpenter	65,500
	230,500

Yours, with esteem,

T. M. NIVEN.

To the Building Committee
of the Smithsonian Institution.

After carefully examining the bids in detail, the messenger was requested to ask Mr. Niven into the committee room; and on being asked whether he was willing to make a contract at his estimate for stone-cutting alone, he (Mr. Niven) replied in the affirmative. The messenger was then requested to call Mr. Dixon; and on being asked whether he was willing to make a contract for the work *exclusive* of stone-cutting, he (Mr. Dixon) asked until to-morrow morning to give an answer.

He was requested to see Mr. Niven on the subject, so as to ascertain whether a contract could be made with them jointly, based on Mr. Niven's bid for stone-cutting, and James Dixon & Co.'s bid for mason and carpenter's work.

After conference in regard to the special provisions of the contract, the architect was requested to draw up a blank contract, and submit the same to the committee at their meeting to-morrow.

And, on motion, the committee adjourned.

TENTH MEETING—March 18, 1847.

Present, Messrs. Seaton, Hough, and Owen.

On motion of the chairman, it was

Resolved, That the specifications be altered so as to require that both the principal stairways, as high as the museum floor, be of stone, with iron balusters, bronzed; and that a floor above the ceiling of the second story, fire-proofed, according to the plan proposed in the report made on the 15th instant by Mr. Hough, be added; and that the tesselated floor of the museum be dispensed with; and that Mr. Hough be a sub-committee to consult with the architect as to what minor alterations in the specifications can be made, so as, with the reduction effected by dispensing with the said tesselated floor of the museum, to meet the additional cost of said stairways and said fire-proof floor, without increasing the aggregate expense of the entire building.

Mr. Dixon, of the firm of James Dixon & Co., appeared, and informed the committee that he was not willing to take the mason's and carpenter's work separate from the stone-cutter's, as yesterday proposed to him. He also informed the committee that he had made an error in the addition of his bid for Seneca ashlar of $2,500, so that the committee must consider that bid as amounting in the total to $205,250, at which amount he stood ready to contract.

It appearing that the bids of James Dixon & Co. for the building were the lowest, to wit:

In Seneca ashlar - - - - - -	$205,250
And in marble ashlar - - - - - -	228,500

And it further appearing to the committee that the ashlar finish of Seneca stone is more durable than the rubble finish:

The committee informed Mr. Dixon that his bid to complete the building in the Seneca freestone, ashlar finish, for the sum of two hundred and five thousand two hundred and fifty dollars, was accepted.

On motion of the chairman, it was

Resolved, That Mr. Hough and the architect be a sub-committee to prepare a blank contract, submit the same to James Dixon & Co., and after obtaining their assent to the same, present it to this committee for approval.

And, on motion, the committee adjourned.

ELEVENTH MEETING—March 18, 1847, (5 o'clock, p. m.)

Present, Messrs. Owen and Hough.

On motion of Mr. Hough, it was

Resolved, That Mr. Owen address a letter to Mr. John P. C. Peter, accepting the offer of quarry-right made to the committee, in letter of Mr. Peter to Mr. Seaton dated 9th December last, and place the said letter in the hands of Mr. Dixon, to be forwarded to Mr. Peter.

And, on motion, the committee adjourned.

TWELFTH MEETING—March 19, 1847.

Present, Messrs. Seaton, Hough, and Owen.

The chairman submitted to the committee a copy of the letter which, in accordance with a resolution passed yesterday, he addressed to Mr. John P. C. Peter, owner of the Bull run quarry, in Montgomery county, Maryland, and which he had last evening caused to be delivered to Mr. Dixon, as follows:

WASHINGTON, *March* 18, 1847.

SIR: I am requested by the building committee of the Smithsonian Institution to inform you, that they have to-day decided upon the material for their building; that their choice is Seneca freestone from some one of your quarries, if sufficient suitable stone can be found in them—probably from that of Bull run; and that they accept your offer made to them in your letter of the 9th December last, addressed to Mr. Seaton, namely, to pay you twenty-five cents per perch for all stone intended for cut work, and twelve and a half cents for all calculated for hammered work.

I am, sir, your obedient servant,

ROBERT DALE OWEN,
Chairman Building Committee.

JOHN P. C. PETER, Esq.

On motion of Mr. Owen, it was

Resolved, That the resolution heretofore adopted, instructing Mr. Peter Gorman to obtain four perches of freestone from Seneca creek, be, and the same is hereby rescinded.

On motion of Mr. Owen, it was

Resolved, That the resolution heretofore adopted, instructing Dr. Owen to make chemical analyses of the Maryland marbles, and particularly of those from Mr. Worthington's and Mr. Symington's quarries, be, and the same is hereby rescinded.

On motion of Mr. Hough, it was

Resolved, That Mr. Owen be requested to write to Mr. McLane, president of the Baltimore and Ohio railroad, and to Mr. Howard, president of the Baltimore and Susquehanna railroad, and to inform them that although, for the sake of economy, the freestone of the upper Potomac has been selected as a building-material, the committee desire to express their sense of the prompt liberality with which the boards of these railroad companies had adopted the suggestion of the building committee in regard to reduction of the rates of transportation in favor of the institution, in case marble was selected.

And, on motion, the committee adjourned to meet at eight o'clock this evening.

THIRTEENTH MEETING—MARCH 19, 1847, (8 o'clock, p. m.)

Present, Messrs. Seaton, Hough, and Owen.

The contractors, Messrs. Dixon and Cameron, appeared; and the contract for the buildings of the institution, which had been prepared by the architect and revised by the committee, having been read to them, they expressed their assent to all its provisions, and declared themselves ready to execute the same.

Thereupon the Secretary of the institution, being present, represented to the committee, that one of the Regents, now in the city, to wit: Professor A. D. Bache, requested to be allowed to examine the provisions of the contract before it was finally executed; but that Mr. Bache was at present too ill to read or examine it.

Upon this suggestion, the committee asked the contractors whether they were willing now to sign, leaving the signatures of the committee to be added to-morrow, after Professor Bache should have had an opportunity to examine the contract.

And the contractors, assenting, signed the contract.

On motion of the chairman, it was

Resolved, That the architect and Dr. Owen proceed to-morrow to Seneca creek, for the purpose of examining the quarries in its vicinity, with the view of selecting the one from which it is expedient to derive the material with which to face the building; and that they present to this committee specimens of the exact tint and quality of freestone they may concur in recommending.

And, on motion, the committee adjourned.

FOURTEENTH MEETING—March 20, 1847.

Present, Messrs. Seaton, Hough, and Owen.

The chairman stated to the committee that he had a conversation with Professor Bache and the Secretary of the institution, and, availing himself of suggestions made by them, had prepared an addendum to the contract; which he submitted as follows:

"It is further understood and agreed by and between the parties to the above agreement, that if the Board of Regents should determine to make important alterations in the plan of building, or in the time of its execution, then, and in that case, the said party of the first part shall receive *pro rata*, according to the prices agreed in the foregoing contract, for work executed, and reasonable damages, if the nature of the case justly demands it. And in case of dispute or controversy in regard to the amount, then the party of the second part may select either the architect of the institution, or any other architect or architects, to arbitrate in the case, and his or their decision shall be final and conclusive in the premises."

And, on motion, it was adopted and signed by the committee, with the understanding that it be submitted to the contractors for their signature. Thereupon the committee proceeded to the site belonging to the institution, and carefully examined the same, with reference to the exact position in which to place the building; but came to no final decision thereon.

And, on motion, the committee adjourned.

FIFTEENTH MEETING—March 20, 1847, (5 o'clock.)

Present, Messrs. Seaton, Hough, and Owen.

Mr. Dixon appeared and signed the "addendum." And the committee appended their signatures to the contract, thus completing the same, as follows:

Contract.

This agreement, made and concluded this nineteenth day of March, in the year of our Lord one thousand eight hundred and forty-seven, between James Dixon and Gilbert Cameron, party of the first part, and the Board of Regents of the Smithsonian Institution, by Robert Dale Owen, William W. Seaton, and William J. Ho[illegible] a committee of three of their number duly appointed for the purpose, and for and in behalf of the said institution, and in accordance with the provision of the fifth section of the act of Congress establishing said institution, of the second part, witnesseth: That the said party of the first part, for their heirs, executors, administrators, and assigns, hereby covenant and agree to and with the said party of the second part, that for and in consideration of the sum of two hundred and five thousand two hundred and fifty dollars, to be paid to them by the said party of the second part, in the manner and at the times hereinafter specified, they will furnish all the materials of every description and perform all the work necessary to construct and completely finish, in the most full, substantial, and workmanlike manner, the whole of the carpenter work, stone-cutting, and mason work, and work connected therewith, for the building of the Smithsonian Institution, in each and all of its parts, including all of its appurtenances, said building being situated on the site for the building of said institution, in the city of Washington, and in a position designated by the said parties of the second part. And the said party of the first part hereby further covenant and agree, that the construction of the said building and its appurtenances shall be in every respect in accordance with the plans, specifications, and directions of James Renwick, junior, the architect of the said institution, all of which shall be considered as part of this contract; which said specifications are hereunto annexed. And the said parties of the first part hereby further covenant and agree that they will furnish materials of the best description, and that the work shall be performed in the most workmanlike and substantial manner.

And it is hereby agreed by the parties to this contract, that the work, during its progress, shall be subject to the inspection and decision of the said architect, who shall have, and is hereby granted, power to condemn and reject all materials and work which shall not, in his opinion, be in accordance with this contract; and the said parties of the first part hereby agree that they will take down all work and remove from the ground all materials which may be condemned by the said architect, at their own cost and expense, on pain of forfeiture of this contract, as hereinafter specified.

And it is hereby agreed by the parties to this contract, that the execution and completion of the building herein contracted for shall occupy a period of five years from the nineteenth day of March, in the year of our Lord one thousand eight hundred and forty-seven, and in such proportions thereof, in and during each year thereof, as the said party of the second part shall direct; and such work to be done at such times and seasons, and in such order, as the said architect shall direct; it being expressly understood that an amount of not more than forty-one thousand dollars shall be expended annually during the first four years of this agreement.

And it is hereby mutually agreed by the parties to this contract, that the parts composing the said building shall be erected in the following times and order, viz: the wings and connecting ranges within two years, and the remainder of the building within five years, from the first day of January, one thousand eight hundred and forty-seven.

And it is hereby further agreed by the said party of the first part, that they will perform all work embraced in this contract as above specified, agreed, and understood.

And it is hereby mutually agreed, covenanted, and understood by the parties to this contract, that, in order to prevent all disputes, the said above-mentioned architect shall decide every question, controversy, or claim, which may or can arise during the execution of this contract from alterations in plan or in any other manner, and that his estimate and decision thereon shall be final and conclusive between the parties, who hereby mutually bind themselves each to the other, to submit to the said estimate and decision of said architect, in the sum of forty thousand dollars, which is to be forfeited and paid by the party who shall neglect or refuse to abide by and perform said estimate and decision to the other party to this contract.

And the said party of the second part hereby agree that they will pay the above-mentioned sum of two hundred and five thousand two hundred and fifty dollars ($205,250) in gold and silver, or in treasury notes bearing six per cent. interest, at their par value, for the whole work, to the said party of the first part, in the manner and times following, to wit: every two months for all materials delivered and work executed according to the estimate and certificate of the aforesaid architect, reserving fifteen per cent. therefrom until the completion of the work; and that when the whole building and work shall be completed, and upon certificate of the aforesaid architect that it has been finished in every respect to his satisfaction, according to the terms of this contract, they will pay the balance which may then be due, including said fifteen per cent., and the interest that may have accrued on said fifteen per cent., at the rate of six per cent. per annum from the times of the several estimates.

And it is hereby agreed and covenanted, that if at any time the said parties of the first part shall, in the opinion of the aforesaid architect, have performed any of the work embraced in the contract in an unfaithful or improper manner, or shall have violated any of the provisions of this contract, or shall refuse to prosecute the work herein contracted for, that then, and in that case, the said architect shall give notice of the same in writing to the said parties of the second part, any two of whom may thereupon terminate this said contract by giving notice thereof in writing to the said party of the first part; and that thereupon this contract shall be deemed terminated, abandoned, and lawfully forfeited by the said party of the first part, and the said party of the second part may proceed to contract for the remainder of the work with any other party or parties, holding all the work done and materials delivered by the said party of the first part, and all the moneys due them therefor, as security for the remainder of the work; and also holding and binding the said party of the first part, their heirs, executors, administrators, assigns, and bondsmen, to make good any further loss or damage which may accrue to the said party of the second part from such defalcation, forfeiture, and abandonment of the work by the said party of the first part.

And it is hereby further agreed and understood by the parties to this contract that the following alterations in the plans and specifications shall be made, and that the same shall be considered as part of this contract:

First. The building shall be faced, and all the cut-stone work dressed from the best Seneca freestone from the upper Potomac, to be taken from the Bull run quarry, or some other quarry in the neighborhood of Seneca creek, to be designated by the said parties of the second part, and free from all imperfections.

Second. That the building shall be faced with coursed ashlar of the above-mentioned freestone, in courses varying from ten to fifteen inches in height, and no two adjacent courses in the building to vary more than one inch in height, brought to a joint not exceeding three-eighths ($\frac{3}{8}$) of an inch in the widest place when laid; taken out of wind; dressed full to the square on the beds, builds, and joints, with a narrow arris drawn around the face of each stone, and the face between the arris pointed off horizontally in a regular manner and at regular distances—say not more than two inches apart—averaging nine inches in thickness, with a proper proportion of bond stone to bind the face to the backing—say one in every $3\frac{1}{2}$ feet square; the clause in the mason's specification, commencing with "the face of the walls shall be strongly tied to the backing," being continued in full force and effect. The whole of the above ashlar to be set in the best manner, and pointed in the manner described in the mason's specification.

Third. That in place of the principal flights of the front and rear stairways, as specified in the carpenter's specification, cut stone steps and platforms of such freestone as shall be selected by the architect, which shall be fine cut and rubbed, with handsome cast-iron newels and balusters, similar to the wooden ones described in the carpenter's specification, and well bronzed in the best manner, with a heavy moulded hand-rail of the best well-seasoned black walnut, shall be substituted. On the heads of each of the above cut-stone steps and platforms, Norman pateras, or flower ornaments, shall be cut by the contractor. The above stone steps shall be carried up as high as the level of the museum floor.

Fourth. That a floor of one and a quarter inch white pine plank, resting on beams of white pine 2 × 12 inches, set twenty inches from centres, shall be carried under the roofs of the whole building and towers; and that the floor beams shall be supported by 8 × 12 inch girders where necessary, and plastering of cement mortar two inches in thickness shall be laid over the top of all of the said above-mentioned floors.

Fifth. That in place of the iron timbers having brick arches and concrete between them, which are specified to be placed in the chemical lecture-room, the students' working laboratory, and the rooms over it, wooden beams 3 × 12 inches, set 16 inches from centres, with a deafening of cement concrete four inches in thickness between them, resting on one and a quarter inch plank, firmly secured to the beams by $3 \times 1\frac{1}{2}$ inch strips, shall be substituted. The above beams shall be furred on the under side, with $2 \times 1\frac{1}{2}$ inch strips, set one foot from centres, and plastered three coats; the last coat shall be hard-finished.

Sixth. That in place of the iron columns in the larger lecture-room, wooden columns, nine inches square, which shall be furred, lathed, and stuccoed in the best manner, with reeds forming clustered columns with foliage caps, bases and plinths, shall be substituted.

Seventh. That in the place of the tesselated wooden floor of the museum, a floor of narrow clear Georgia yellow pine plank not more than five inches wide, planed, tongued and grooved, laid in courses and blind-nailed in the best manner, shall be laid. The heads and sides of all the plank shall be planed after they are laid, so as to be perfectly true and even when finished.

Eighth. That on the eight corners of the fourth story of the higher central front tower, eight columns, one foot in diameter and of the height of the story, with foliage caps, bases, and plinths, shall be well and truly cut.

And it is hereby further covenanted and agreed by the said parties of the first part, that they will not employ any sub-contractor who shall be objected to by the architect; and further, that the said architect shall have power to discharge any laborer, foreman, and sub-contractor, who may, in his opinion, be incompetent or unfaithful; and the said parties of the first part shall not further or again employ, directly or indirectly, any of the above-mentioned persons, on pain of forfeiture of this contract, as herein before specified. And the said parties to this contract hereby mutually agree, that in case of the absence of the said architect, or of his inability to act, that then, and in that case, his assistant or successor, to be appointed by the said party of the second part, shall be, and is hereby, invested with all the powers granted to the aforesaid architect, in this contract.

In witness whereof, the said party of the first part have hereunto set their hands and seals, and the said party of the second part hereunto subscribed their names, and affixed the seal of the Smithsonian Institution, the day and year first above written.

Signed, sealed, and delivered, in presence of

JAMES DIXON, [L. S.]
GILBERT CAMERON, [L. S.]

ROBERT DALE OWEN,
WILLIAM J. HOUGH,
W. W. SEATON, } *Committee.*

Addendum to the above contract.

It is further understood and agreed by and between the parties to the above agreement, that if the Board of Regents should determine to make important alterations in the plan of building, or in the time of its execution, then, and in that case, the said party of the first part shall receive *pro rata*, according to the prices agreed in the foregoing contract, for work executed, and reasonable damages, if the nature of the case justly demands it; and in case of dispute or controversy in regard to the amount, then the party of the second part may select either the architect of the institution, or any other architect or architects, to arbitrate in the case, and his or their decision shall be final and conclusive in the premises.

JAMES DIXON.
GILBERT CAMERON.

ROBERT DALE OWEN,
WILLIAM J. HOUGH,
W. W. SEATON, } *Committee.*

WASHINGTON CITY, D. C., *March* 19, 1847.

Specification of the masonry and materials for the Smithsonian Institution.

GENERAL DESCRIPTION OF BUILDING.

The building will consist of a centre, which will be 50 by 200 feet in the clear, inside. Two connecting ranges, 60 feet in length in the clear, inside, and averaging 47 feet broad in the clear, inside. An east wing, 45 by 75 feet in the clear, inside, with a vestibule and porch attached to it; and a west wing, 34 by 65 feet in the clear, inside, exclusive of the apsis or semicircular projection.

Towers.—There will be two central front towers, one central rear tower, a campanile or bell tower, a large octagonal and two smaller towers, with porches, vestibules, stair halls, &c., attached to the centre.

The east wing, or chemical lecture-room, will have a bell tower, six chimneys, a vestibule and porch, attached to it; and the west wing will have a campanile tower, and apsis or semicircular end, connected with it.

The central building will contain, in the first story, the principal central hall, and the library, with groined ceilings, and the principal lecture-room, with a panelled ceiling. The second story will contain the museum, also finished with a groined ceiling.

The larger central front tower will contain a furnace cellar in the basement. In the first story a librarian's room, and a room over it in a mezzanine story, all with groined ceilings. In the second story, a room connected with the museum, with a groined ceiling, and over it a room eight feet in height. Above the line of the roof of the main building it will contain four stories, completely finished.

The lower central front tower will be divided in the same manner below the line of the roof; and, above this line, will contain three completely finished stories. The spaces between the front towers, and between the central building and the front towers, will contain in the basement a cellar, connecting the coal cellars in the towers. In the first story the front vestibule, with a groined ceiling, and the front stair wells; and in the second story, a continuation of the museum, with groined ceilings, and the second flight of front stairs, with groined ceilings. Between the two towers the carriage porch will project, and shall have a groined ceiling.

The central rear tower will contain, in the basement, a furnace cellar; in the first story, the rear vestibule and part of the rear stair hall; in the second story the Regents' room, and a room over the rear staircase hall, which will be connected with the museum, all having groined ceilings; and in the third story, which will be divided internally into two stories, the lower one the Secretary's and the upper one a muniment room.

In the small octagonal tower, connected with the central rear tower, will be a circular staircase and a fire-proof safe.

In the space between the central rear tower and the main building will be the remainder of the central rear stair hall; and over it a room connected with the gallery of the museum, all having groined ceilings.

The campanile tower will have a furnace cellar in the basement, and will be divided, above the basement and below the roof of the main central building, into three stories, with groined ceilings communicating with the principal lecture-room and the museum. Above the line of the roof it will be divided into four stories, completely finished.

The larger octagonal tower will contain, in the basement, a furnace cellar; in the first story a circular stair, with a groined ceiling, connecting the gallery of the library with its ground floor; in the second story a similar circular stairway; and above the line of the roof of the central building two stories completely finished.

The two smaller towers will contain elevators and ventilating flues.

The west connecting range will be finished in the basement eight feet high in the clear; above the basement it will be occupied with a cloister and gallery of art; which latter will be divided by stone pillars, supporting a clerestory, into three aisles, with groined ceilings.

The west wing will be finished in the basement eight feet six inches high in the clear; the upper story will contain a gallery of art, with a groined ceiling. The tower attached to the west wing will be occupied by a staircase well, and other apartments, with groined ceilings where directed.

The east connecting range will be finished in the basement eight feet six inches high in the clear, and behind the cloister and above the basement it will be divided into two stories, each twelve feet high in the clear. The upper story will be lighted by openings in the parapet, which is not shown in the plans, but which will be three feet six inches high; both stories will be completely finished. The cloister will extend along the front of the wing, and will have a groined ceiling.

The basement of the west wing, and its vestibule, will be finished nine to ten feet high in the clear.

Above the basement it will contain the chemical lecture-room, and its gallery, and the laboratory connected with it; which latter will be divided into two finished stories.

The vestibule will contain the stair hall, and all the above rooms will be finished with groined ceilings.

Excavation, levelling, and refilling.—The trench for the foundation walls of the central building shall be excavated to a depth of four feet six inches, and for the connecting ranges and wings to a depth of five feet six inches below the present surface of the ground, at the centre of the north side of the building.

The trench for the foundation walls of the principal central front towers and the central rear tower shall be excavated to a depth of eight feet (8 feet) below the above line; and for the campanile, octagonal, and all the lesser towers, to a depth of six feet (6 feet) below the above line.

The trenches for all the partition and interior walls, and for all the foundations under pillars, &c., shall be excavated to the same depth as those for the outside walls with which they are connected.

The earth between the wall trenches, in both wings, both connecting ranges, and the great lecture-room, shall be excavated to a depth of 5 feet below the same line under the whole building.

The earth between the foundation trenches of all the towers and the space on the north front between the central towers will be excavated to a depth of 6 inches less than the trenches of the walls.

All remaining excavation for areas, coal-slides, sess-pools, sinks, &c., necessary to complete the building, to be performed by the contractor, and according to the direction of the architect.

Refilling.—A part of the earth thus excavated shall be thrown back into the trenches, (on the outside of the walls and inside, so far as may be directed,) after the walls are built. It shall be thrown in in layers, and well rammed, so as to prevent all settlement. The remainder of the earth shall be removed and levelled off in such places and in such manner as may be directed by architect.

Outside excavation.—All the excavation necessary to bring the present surface of the ground to a level with the top of the foundation wall at the building, and to slope it in every direction for drainage, for a width of 60 feet (sixty feet) from the building, in every direction, will be performed by the contractor.

Grubbing and clearing.—All the sod, roots, and in general all vegetable mould and perishable matter, shall be removed from the whole area covered by the building.

And, in general, all excavation, refilling, grubbing, and clearing, necessary to complete the building in every respect, will be performed by the contractor, in accordance with the directions of the architect.

Masonry in foundation—concrete.—Under all the walls of the building a foundation course of concrete masonry, which shall be made by mixing two parts of best hydraulic cement with one part of lime in paste, with eight parts of clean sharp sand, which shall be thoroughly mixed and well tempered, and nine parts of broken stone, not exceeding two and a half inches in diameter. The whole shall then be thoroughly mixed, and well tempered, and laid in courses of six inches, and shall be well rammed, when laid, with a heavy maul, so as to insure the perfect solidity of the whole mass.

The concrete shall be laid to the following dimensions, under the different parts of the building:

A.—Under the two central front towers twelve (12) feet wide on bottom, ten (10) feet wide on the top, and two (2) feet in thickness, under all the walls and buttresses.

B.—Under the central rear tower, and the campanile and octagonal towers, ten feet wide on the bottom, eight feet wide on top, and two feet in thickness, under all the walls and buttresses.

C.—Under all the remaining towers, eight feet wide on the bottom, six feet wide on the top, and one foot six inches in thickness.

D.—Under the walls and buttresses of the central building, six feet wide on the bottom, five feet wide on the top, and one foot in thickness.

E.—Under the connecting ranges and principal partition walls, four feet six inches wide on the bottom, three feet six inches wide on the top, and one foot in thickness.

F.—Under the wings, five feet wide on the bottom, four feet wide on top, and one foot in thickness.

G.—Under the piers supporting the clerestory columns of the gallery of art, six feet six inches square on the bottom, five feet square on the top, and two feet in thickness.

H.—Under all the remaining piers, for the columns of the library and the lecture-room, five feet square on the bottom, four feet square on the top, and one foot six inches in thickness.

Stone masonry in foundation.—The masonry of the foundation shall be laid of large, well shaped, gneiss building-stone, of the best quality, with level beds and builds, laid in courses, with strong bond. The stones shall be of large size, not less than three feet in length; the beds shall be hammered true and even, and the joints brought close together. All the joints shall be filled completely with mortar and spaulls, so as to leave no cavities which might endanger the stability of the walls, and the outside joints shall be well pointed.

The foundation shall be laid of the following dimensions of cross section, under the different portions of the building:

A.—Under the central front towers, 1st, a course nine feet wide and two feet thick; 2d, a course seven feet wide and two feet thick; 3d, a course five and a half feet wide and two feet thick.

B.—Under the central rear tower, and the campanile and octagonal towers, 1st, a course of stone seven feet wide and two feet thick; 2d, a course of stone five feet wide and two feet thick.

C.—Under all the remaining towers, 1st, a course of stone five feet wide and two feet thick; 2d, a course of stone four feet wide and two feet thick.

D.—Under all the walls of central building, 1st, a course of stone four feet and a half wide and two feet thick; 2d, a course of stone three feet eight inches wide and one and a half foot thick.

E.—Under the connecting ranges and principal partition walls, the foundation will be three feet six inches wide, and four feet six inches in height.

F.—Under the wings, 1st, a course four feet wide and two feet thick 2d, a course three feet six inches wide and two feet six inches thick.

G.—Under the piers supporting the clerestory of the gallery of art, a foundation of stone four feet square on the bottom, two feet six inches square on the top, and three feet in height.

H.—Under all the remaining piers, for the columns of library, lecture-room, &c., a foundation two feet square, and three feet six inches in thickness.

I.—Under all the remaining partition walls a course of long stone, three feet six inches in length, and not less than eight inches in thickness, will be laid.

Under all the porches and buttresses, the foundation will be of the same section and materials as the walls they are connected with, and they will be well bonded to them. All the remaining stone work necessary to complete the foundation, will be performed; areas and coal slides will be built to all the openings to the furnace cellars, in the towers, and to the basement windows, of such dimensions as may be directed by the architect. The faces of the walls will be well hammer-dressed, and neatly pointed.

The mortar for all the above stone foundation walls shall consist of the best hydraulic lime and clean sharp sand, mixed in the best proportions, and thoroughly tempered.

Brick masonry in foundation.—Inverted arches, of the best hard brick, will be turned under all the openings of the foundation, of the thickness of the walls in which they are placed, and of such other dimensions as the architect shall direct. The arches will be laid in the most true and even manner, with very close joints, which will be well slated up, to prevent all settlement in the mortar.

Groined arches of the best hard brick, laid in the best manner, with close joints, the 7-key courses being grouted up and slated, will be turned under the two central front towers, and space between them, the central rear tower, the campanile and octagonal towers of the main building, and the tower of the west wing. The arches will be nine inches, or one brick thick, and will be backed over with spandrils and haunch walls, and the floors above them will be of best North river flag, axed smooth on the upper surface, and cut true and even in the joints.

Partition walls.—The main partition walls of the central building will be of stone, in the foundation as above described. The lesser partition walls, for the rooms in the connecting ranges and wings, will be laid up of the best hard brick, and of the following section: 1st, a course of bricks 18 inches wide, 5 inches high; 2d, a course of bricks 14 inches wide, 5 inches high; and for the remainder of the height, or nine feet, they will be nine inches in thickness, and of the lengths shown on plans.

All the above brick masonry shall be laid with the closest possible joints, especially in the arches, which shall be slated in the joints, and all the bricks shall be well wet before they are laid. Proper openings for doors, with semicircular arched heads turned over them, shall be built in the walls, in the places shown on the plans, and where the architect shall direct.

Arches of brick, of such dimensions as the architect shall direct, will be turned behind all the stone arches of the windows and doors.

The mortar for all the above brick masonry shall be composed of best hydraulic or ground lime, or a mixture of hydraulic cement and lime in paste, mixed with the best clean sharp sand, and throughly tempered.

All the remaining stone and brick masonry necessary to complete the foundation to be performed by builder, whether specified or not.

WALLS OF BUILDING ABOVE FOUNDATION.

Stone masonry.—The walls shall be faced with the best broken rubble masonry, of white marble, or buff-colored Seneca stone of even color and best description, or of granite similar to that in the rear of the General Post Office; and the contractor will state in his estimate the expense of constructing the building with each of the three above described materials. The face of the stone shall be brought to the square by the mason's hammer, care being taken to pick, as far as possible, such stones for the face as will require little dressing; the object being to preserve, as far as practicable, the natural face of the stone, with the crystals unbroken. The beds, joints, and builds of the stone shall be dressed true and even, so that the joints shall not exceed one half of an inch in the widest place. The style of the front shall be either broken or angular rubble, and the face shall be laid in the manner directed by the architect. The facing shall average ten inches in thickness, and no stone will be allowed in the work whose breadth of bed is less than two-thirds its height. The stone shall be of nearly uniform color, free from all sap, iron pyrites, and all other discoloring or deteriorating material, and especially in the white marble, from the decomposing carbonate of magnesia.

The face of the wall shall be strongly tied to the backing by headers of the same material as the face, running in places through the wall, and in no case less than twenty inches in depth, and furnished in such numbers as the architect shall direct—say one in every three feet six inches square. All the arres of the buttresses, towers. &c., and all the corners, splays, and angles, throughout the whole building, shall be dressed with the chisel so as to be perfectly plumb, true, and even, when laid. No quakers will be allowed in any part of the work. All the stones shall be laid on their natural beds. The heading stones on the corners of all the towers, buttresses, and of the whole building, shall have beds at least equal to their heights on face. The joints shall be pointed with a mixture of the best quicklime and blacksmith's scales and sand, and shall be smooth struck on the face; and, after it has set throughout, the joints shall be painted to the color of the face with the best pure white lead and boiled linseed oil, colored to the color of the stone. All the walls will be backed in with best blue gneiss, of good shape and size, laid on the natural bed, and well bonded to the face work. Behind the outside walls, and at a distance of four inches from them, a five-inch brick wall, tied to the outer wall by at least one bond stone in every three feet square, will be laid. This backing will be returned, to meet the front wall at all the jambs and arches of all the windows and doors. It will also be tied to the front walls, in the piers between the windows, by brick cross walls nine inches thick, to form the flues; which flues will be constructed as follows: In each of the piers between the windows there will be three flues 8 by 16 inches in the clear inside, which will be carried from a point three feet below the under side of the beams of the first story to the top of the building. One of these flues will be connected with the furnaces by a horizontal flue of galvanized iron, or double-cross tin, two feet square, which will be furnished by the contractor, for the purpose of diffusing the hot air throughout the building. All these flues will have neat registers in the rooms, for the proper regulation of the heat. The second flue will have an opening in each story, on the line of the ceiling, on the outside of the wall, and another opening into the bases of the rooms inside: these will admit the cold air from the outside of the building into the respective rooms for the purpose of proper ventilation, and will be closed up on the level of the floor of each story, by a cross wall over the outside opening; and each of the above flues will be furnished with a heavy sheet-tin slide valve, with proper fixtures for opening and shutting, placed in such part of the flue, and made in such manner, as may be directed by the architect.

The third flues will have openings on the inside on a line with the ceilings of all the rooms; through these the foul and heated air will be carried off and discharged by an opening under the coping of the building. All these flues will be furnished with two sheet-tin valves each, made and placed in the manner directed by the architect. Proper flues, well parged, will be carried up for the furnaces, fireplaces, engine, laboratory, &c., in such places as may be directed by the architect.

In addition to the above ventilating flues, openings with valves will be formed in all the groined ceilings, which will be connected with the corner towers and flues in the larger towers.

Thickness of walls.—The thickness of the walls of the main building above the water tables will be two feet six inches in the first story, and two feet in the second story, exclusive of all projections of the buttresses, corbel courses, battlements, bands, &c.

The thickness of the end walls of the main building will be two feet six inches for a height of fifteen feet above the line of the water table, and for the remaining portion two feet, exclusive of all projections.

The thickness of the walls of the connecting ranges above water table will be twenty-two inches, exclusive of all projections.

The thickness of the clerestory wall of the west range will be sixteen inches, and it will be backed in with good hard brick.

The thickness of the walls of both wings will, above the water table, be two feet, exclusive of all projections and the batter at the base of the east wing.

The thickness of the walls of central front towers will be three feet six inches in the first stories, three feet in the second story, two feet six inches in the third story, with the corners filled in to aid in supporting the octagon, and two feet in the fourth story, which will be backed in with good hard brick, exclusive of all projections.

The thickness of the walls of the central rear tower will be three feet in the first story, two feet six inches in the second story, and two feet in the third story, exclusive of all projections.

The thickness of the walls of the campanile, exclusive of all projections, will be two feet to the line of the roof of the main building, and above this line twenty inches, and backed in with best hard brick.

The thickness of the walls of the octagonal tower will be two feet three inches to the line of the roof, and twenty inches above the line of the roof, and backed in with brick, exclusive of the batter at the base and all projections.

The thickness of the walls of the remaining towers will be two feet on an average, exclusive of all projections, and the stories above the roofs will be backed in with brick.

All the remaining walls, if any, to be in no case less than two feet thick, and to be executed by the contractor.

All the thicknesses above given are exclusive of the brick lining wall.

Brick masonry.—All the partition walls which rise above the basement will be two bricks—say 18 inches in thickness—to the height of the floor of the second story, and one and a half brick—say 14 inches in thickness—from thence to the under side of the rafters of the roof. Arches for doors and windows will be turned, of such sizes and in such places as may be directed by the architect.

All the interior arches behind the window arches, door arches, &c., will be turned in such manner as architect shall direct, to the form of Norman jambs, to receive the plaster of the jambs. Trimmer arches of brick, nine inches thick, will be turned for all the hot-air and furnace flues in all the floors.

The arches over the pillars supporting the clerestory of the gallery of art, in the west connecting range, will be of best hard brick, laid to such form as the architect shall direct, and over them a brick wall eighteen inches thick will be carried up to the level of the under side of the roof of the side aisles.

Groined arches of brick, eight inches thick, will be turned in the most perfect manner for the ceilings of the mezzanine and upper story of the porter's apartments, which will be situated in the lower central front tower; they will be filled in with spandrils and haunch walls, supporting flag floors of North river flag. If preferred by the contractor, the iron beams, with brick arches between them, hereinafter described, may be used in place of the above groined arches.

All the remaining brick-work necessary to complete the building to be performed by the contractor, whether specified or not.

Cut-stone masonry.—All the cut-stone masonry, of every description, which will be found in the specification of the stone and cutting, will be set by the mason in the most true, perfect, and substantial manner; and all the iron dowels, clamps, anchors, rods, &c., necessary to secure and render perfect the stone work, will be furnished by the mason; and the joints of the cut-stone masonry will be pointed in the same manner as above described for the face of building.

Mortar.—All the mortar for all the above brick, stone, and cut-stone masonry, to be composed of the best hydraulic or ground lime, or of a mixture of hydraulic cement and lime in paste, in such proportions as architect shall direct, mixed with clean sharp sand, in the best proportions, and thoroughly tempered.

All the bricks will be well wet before they are used.

All the stones will be laid on their natural beds, and thoroughly cleaned from dust or dirt before they are laid, and wet, if so directed by the architect.

Lathing and plastering.—All the ceilings and walls, and stud partition walls, of every part of the building, will be lathed to the forms laid down on the plans, or as directed by the architect, with the best sawed laths, five nails to each lath.

All the walls and ceilings of all the rooms in the basement story will be plastered with a scratch coat, brown coat, and hard finished coat, laid on true and even, and finished in the best manner.

All the walls and ceilings of the professors' rooms, laboratories, and rooms in the towers, to their tops, except such as are groined, will be plastered in a similar manner, with three coats.

All the canopies and partitions in lecture-rooms to be plastered three coats, as above described.

All the remaining halls and apartments in the whole building, including library, museum, the two lecture-rooms, the two galleries of art, the great central hall and its vestibules, the Regents' room, the front and rear stair halls and the rooms in the two central front towers, the octagonal and campanile towers below the line of the roof of the main building, will be plastered throughout with two coats, a scratch coat and a stucco-finished brown coat, well hand floated, laid on in the most perfect, true, and even manner. The brown coat will be laid off in courses and colored to represent stone.

Ornamental plastering.—All the ceilings of the museum, library, galleries of art, and the rooms connected with them, will be groined and ribbed in the best manner, according to the plans and directions of the architect. The ribs will be run at the intersection of all the groins, and across the ceilings between the groins, against the walls over the windows, and in all places which the architect shall direct; all the red lines on the plans being ribs. The ribs shall be of rich Norman section, and of good proportion, varying from 7 by 9 to 11 by 13 inches in the ceilings, and of larger dimensions in the arches over the columns dividing the aisles. In the gallery of art, heavy ribs, twenty inches wide, shall be run under the arches supporting the clerestory.

At the intersection of all the ribs, and at the crown of all the ribs not intersected by others, bosses of foliage, of the best Norman design, which will be furnished by the architect, and of the richest character, well relieved from the grounds, will be placed.

The shafts of all the columns of all the apartments and halls, which shall be of the richest character, composed of clusters of engaged columns in rebates, and made according to the plans of the architect, will be run with gaged mortar, in the best, truest, and most workmanlike manner; and all the separate columns of each clustered shaft shall have moulded plinths, and bases, and foliage Norman caps, of such design as architect shall furnish, and put up and modelled according to his directions.

Around all the windows a handsome moulded Norman jamb and arch, whose section shall be a double rebate, with two engaged columns, shall be run. All the columns of the above to have plinths, and bases, and foliage Norman caps; and a label mould, resting on two foliage corbels, will be run around the arch of each window; and all the above work shall be executed according to the plans and directions of the architect.

Around all the doors, Norman jambs and arches, of the same section as those of the windows, but with more mouldings, where directed, shall be run. In the arches the mouldings will be ornamented with chevrons, cable moulds, and foliage bands, according to the directions of the architect.

The main central hall, the entrance porch, the rooms in the central front towers, the Regents' room, the rooms and stair wells in the octagonal and campanile towers, and the ceilings of the principal staircase, halls, and vestibules, and vestibule and porch ceilings of the east wing, together with the room over the central front and rear stair halls, and the ceilings of both of the wings, will be also groined and ribbed in the best manner, and finished, in every respect, as above described for the museum, &c. All the doors and windows will be finished as above described.

The ceilings of both the cloisters will be groined in a similar manner.

All the columns, &c., in all the above rooms, will be finished as above described; and there will be in all the rooms of the whole building clustered columns in the centre of the piers between the windows, with plinths, bases, and foliage caps.

The Regents' room will be finished all around with clustered columns and arches, dividing the walls into panels above the wainscoating. All the arches over these columns, and those of the triple arched opening between the room and the bay window, will be ornamented with zigzag, cable, and other Norman mouldings, as may be directed by the architect. All the doors and windows of all the above rooms to have mouldings, pillars, &c., as above described for the museum, &c.

The main ceilings of the principal lecture-room, and the gallery ceilings of the principal lecture-room, and of that in the east wing, will be level, and will be heavily pancelled with rich ribs, having foliage bosses at their intersections. All the columns, and half columns, in the centre of the piers between the windows, all the window and door jambs and arches of the above rooms, to be of the form and workmanship hereinbefore described.

All the columns, window jambs and arches, door jambs and arches, ribs, &c., of all the above described rooms and halls, to be laid off in courses to represent stone.

All the remaining plaster work, both plain and ornamental, necessary to complete the building, will be performed by the contractor, whether specified or not.

The mortar will be made of the best Potomac or Thomaston finishing lime, and clean sharp sand, mixed in the best proportions, and thoroughly tempered. The plaster for the hard finish and gaged mortar to be of the best quality.

All the arres, angles, ribs, pillars, &c., to be kept perfectly plumb, true, and even.

Coloring of walls.—All the walls which are not hard finished will be colored by a mixture of lime-water and white, green, and blue vitriol, as may be directed; with which, such colors as the architect shall direct shall be mixed.

The coloring shall be put on in two to three coats, and the last coat shall be colored different shades on the different parts of the walls, ceilings, &c.

Deafening.—All the floors which are not formed on groined ceilings, or on iron beams with brick arches between them, will be deafened with a mixture of lime, clay, and sand mortar, laid on of such thickness as the architect shall direct.

Iron work.—All the copings, cornices, battlements, window jambs and mullions, sills, chimney caps, and in general all the stone work, &c., will be tied together with strong wrought iron clamps, anchors, dowels and rods, well leaded to the stone work, and of such dimensions as may be directed by the architect.

Wrought iron bars $\frac{3}{4}$-inch in diameter, and of the widths of the different windows to the outside of the jambs, will be used where directed, to tie the centre mullions to the jambs, especially in the octagonal story of the large central tower, and in the greater and lesser octagonal, and the small square towers of the central building.

A bar of $\frac{3}{4}$ by 2 inch wrought iron will be carried all around both stories of the larger octagonal tower, and around the smaller octagonal, and the small square towers of the central building, on a level with the spring line of the arches of the windows.

Gratings, of $\frac{3}{4}$ by $1\frac{1}{2}$ inch wrought iron, will be furnished for the areas of the different towers.

Lightning rods.—Five lightning rods, of wrought iron, one and a half inch in diameter, will be furnished by the mason. They will be furnished with elbows, glass thimbles, and platina points, of the best description, and will be put up in the following places: one on the great central front tower, one on the campanile tower, one on the octagonal tower, one on the tower of the west wing, and one on the tower of the chemical wing; and they will be carried ten feet above the tops of the towers to which they are attached.

Flagging.—The floors of the basement, of the chemical or east wing, and its vestibule, and the east connecting range, shall be flagged with the best North river flag, laid perfectly level, true, and even, and dressed in the joints, and laid in at least 12 inches of clean sharp sand and gravel, with at least six sess-pools, four feet in diameter and six feet deep, under each of the above parts of the building.

The cellars under the front towers, and the space between them, as well as those of the central, rear, campanile, octagonal, and tower of the west wing, will be similarly flagged.

After the flag are laid, the joints will be grouted with a mixture of cement and sand.

The floors of the two cloisters will be flagged with best North river flag. axed perfectly smooth on the upper surface, and the stones will be of equal size from two to three feet square, and laid diamond-wise in cement-mortar.

The floors of the two galleries of art, in the western wing and western connecting range, will be flagged with the best North river flag, axed perfectly smooth, and cut to the form of octagons, of equal size, not more than two feet in diameter. The squares between the octagons will be filled with tiles of white marble or of red Seneca stone, as may be directed by architect, and this will be laid in best cement and sand-mortar.

The floors of the vestibules and central hall will be flagged with the octagon and square as above.

All the joints of all the above flagging will be cut perfectly true, and the tiles will be bedded on the best cement and sand-mortar.

The floors of the rooms over the groined arches, in the central front towers, will be flagged with best North river flag, as above described for the cellars themselves, laid in the best cement and sand-mortar.

Fire-proofing.—The floor of the chemical lecture-room, which occupies the whole east wing, and the floors of the students' working laboratory, and the room above it in the east connecting range, each of which is 38 by 24 feet in the clear, will be rendered fire-proof in the following manner. Cast iron beams of the shape of the letter T reversed, whose vertical arm will be 15 inches in depth, by 1¼ inch in width, with a bead on the upper end 2½ inches in diameter, and whose horizontal arm will be eight inches long, and average 1½ inch in thickness, will be laid four feet from centres; the ends of these beams will run nine inches into the walls, and will rest on a cast iron plate, 3 inches wide by 1 inch in depth, which will be firmly anchored to the walls; between these beams, arches of brick five inches in depth will be turned to form the floors. The spandrils over the arches will be filled in with a mixture of lime, sand, and broken stone or gravel, over which a flooring of best North river flag, well axed on the upper face, and not more than two inches thick, will be laid in the best cement and sand-mortar.

The floors of the rooms over the janitors' room and of the two rooms in the towers, on a level with the museum, making in all four floors 16 feet square, (exclusive of those over the groined arches in the cellars of the front towers,) will be similarly fire-proofed, unless they are groined with brick as hereinbefore specified.

The floor of the principal lecture-room will be tiled with best North river flag, laid on brick cross-walls, and well jointed and bedded in cement and sand-mortar.

A border of colored marble tiles four inches square, laid on bricks, in cement or plaster of Paris, will be carried around the Regents' room, three feet in width.

Safe.—A fire-proof safe will be constructed in the small octagonal tower, attached to the rear tower, with double wrought-iron doors, and iron shelves and hollow brick casings, per directions of architect.

A mantelpiece of red marble, or of such color as the architect shall direct, and of the richest Norman pattern, having two columns on each side, whose shafts will be a cable-mould and chevron, with plinths and moulded bases, and foliage caps of the richest character; over the columns a rich frieze, which will be ornamented by a band of Norman foliage, will be carried, and over this a label mould filled with pateras or rosettes. Upon this mould the shelf will be laid, which will be at least three inches thick, and moulded in the front and ends. All the remaining parts of the chimney will be completely finished in the best manner. The sides and back of the fireplace will be laid up of best fire-brick, laid herring-bone fashion.

Dry walls of stone.—There will be four sinks or sess-pools, eight feet in diameter and twelve feet deep, walled up in the best manner, with dry stone, and placed in such positions as the architect shall direct.

Twenty-four sess-pools, four feet in diameter and six feet deep, walled up with dry stone, will be built under the different floors of the building.

All the remaining mason work of every description, necessary to complete the whole building in the most perfect manner, will be performed by the contractor.

As it is the intention of the above specification, with the plans, to cover the entire and perfect completion of the work, no charge for extra work will be allowed the contractor, unless caused by actual alterations of the plans. And the contractor will be bound by the sum of ten thousand dollars, to abide by the decision of the architect, whose decision in all matters relating to the form, dimensions, and finish of all the parts of the work, shall be final and conclusive.

J. RENWICK, Jr , *Architect.*

[Note.—Contractors will also estimate the difference in expense between facing the building with rubble masonry, as hereinbefore specified, or of setting the whole face with ashlar, varying in height of course from ten to fourteen inches, and averaging eight inches in thickness, the ashlar being furnished by the stonecutter.]

Specification of the stone and cutting for the Smithsonian Institution.

GENERAL DESCRIPTION OF STONE.

The contractors will estimate on furnishing all the stone necessary for the cutting and the expense of the cutting itself, and will furnish three separate estimates of the above, based on white marble, buff colored sandstone of the best quality and uniform color, from the upper Potomac, and granite of the same color and quality as that in the rear of the General Post Office of the United States.

CUTTING.

North front porch—Will consist of three arched openings of the dimensions shown on plans, in courses not exceeding 15 nor less than 12 inches rise. The jambs will each contain four rebates, filled each with a $\frac{3}{4}$ column on the exterior face, and one rebate, filled in like manner, on the interior face. [See plan A, drawings No. 1.] All the columns will have handsome moulded Norman plinths and bases and foilage caps. The arches of each side will contain a similar number of mouldings to the jambs, and each arch will be ornamented with a zigzag, battlement, and cable, or other ornamented mouldings.

The buttresses will be cut of similar courses to the doors, and bush-hammered on the face, with moulded caps and a double water table. Between the buttresses on all three sides a corbel course handsomely cut, and eight to twelve inches projection of semicircular arches, resting on foliage brackets, will be carried; and over the corbel course a label mould supporting the battlement. The battlement will be well cut to the section shown in No. 2, plan A. All the face work of the porch will be cut both inside and outside.

Front door.—Between the central front towers and under the porch a door, of the dimensions shown on the plans, will be placed. The jambs will consist of three rebates with $\frac{3}{4}$ columns, bases and caps, cut as above, and the arch will contain three mouldings, one of which will be ornamented with a zigzag or cable mould.

Sills and steps.—The sill of the door will be made in three heights of eight inches each, to form steps to rise from the ground to the first floor.

The window and niches over front door will have jambs of a single rebate, with a $\frac{3}{4}$ column, with moulded plinths, bases and foliage caps. In the arches the columns will be replaced by an octagon, and an octagonal label mould resting on four corbels will be carried over the heads of the three openings, for section of windows. (See plan A, No. 3.) Sills will be 10 inches in height.

Circular window will be of the diameter shown on plan. The section of the jamb will be as shown on plan A, No. 4, and the tracery will be per plans and direction of architect, the mullions not being less than six inches diameter, with moulded caps, plinths and bases, and the arches being splayed on both sides, and handsomely foiled; the foil in centre to be sunk through.

The moulding under the circular window will be a hook label, of size shown on plans.

If so directed, the circular window shall have tracery similar to the one in the west end of the centre building.

Under the interlaced arches of the battlement, another label mould, eight to twelve inches high, will run. The interlaced arches will be 18 inches higher than shown in plan, and will be sunk through. The pillars will be octagonal, with plain plinths, bases and caps, supporting the arches, and over the arches a neat hook label of proper size will be run. Niches or windows in pediment. Three niches, (or if so directed, windows,) with a splay and column jamb and arch, (plan A, No. 5,) will be cut for the pediment. Their sills seven inches high.

A corbel course will be carried up the pediment, of semicircular corbels, resting on neat brackets, and projecting eight inches from face of wall. The cornice or coping will be 12 inches by 28 inches, cut to the form of three sides of an octagon, and on the apex of the gable a handsome finial will be cut the size shown on plan, and of approved design.

Two base courses or water tables will be carried around the whole building, with the exception of the east wing. They will be cut to the dimensions and section directed by the architect.

Central front towers.—On all the corners of all the buttresses, which will be of rubble masonry, an arris two inches wide each way will be cut, so as to enable the stones to be set perfectly vertical, plumb, true, and even.

Buttress caps.—All the buttress caps to be of cut stone, handsomely moulded and finely cut, per directions of architect.

The 1st row of corbels under zigzag mould will be of good design, eight on each side of each tower, well moulded and cut with foliage and heads.

An enriched lozenge or zigzag mould will be cut of dimensions shown on plans, sunk six inches between the panels, and of such pattern as the architect shall direct, and cut in the best manner.

Sills of 1st tier of windows, and niches, and sill course.—Over the zigzag an octagonal sill course six inches high will be carried. Sills of windows will be 10 inches high. Jambs of 1st tier of windows will consist of a splay and column, (see plan A, No. 7.) Arches of splay and octagon, (see plan A, No. 8.) A label resting on corbels will be carried around the heads of the windows and niches. The mullions will be cut to the form of a double jamb, with a fillet between them, (as shown in Nos. 8 and 9.)

The bases, plinths, and capitals, will be furnished for all the columns of such design as architect shall direct, and they shall have foliage caps well undercut.

In the arches the column will be replaced by a square with a beed on the angle, or by an octagonal mould, (see plan No. 9,) and the remainder of the arch shall be the same as the section of the jamb.

Corbel courses over the 1st tier of windows.—A handsome corbel course, with moulded corbels under the arches, shall run all around both towers, (see Nos. 10 and 11,) and project from six to eight inches; a moulding shall run over the head of the corbel course, with a batter on top to shed the rain.

Between the corbel course and the band under the 2d windows a panel course, well sunk, (see plan A, No. 12,) will be carried around both towers, of such design as architect shall direct.

The sill course under the second windows will be a semicircle and fillet, and five sides of an octagon, of the height shown on plan, and finley cut.

The sills of the 2d tier of windows will be 15 inches in thickness.

The jambs, arches, labels, plinths, bases and caps, will be of the same section as those of the 1st tier; they will be finely patent-hammered or well cut, and of such dimensions as to section as the architect shall direct.

Corbels over 2d tier of windows.—On each side of each tower, nine or ten corbels or modellions of good design, handsomely moulded, will be placed, and of such size as architect shall direct. These corbels will support an octagonal moulding, well cut, and of such dimensions as architect shall direct.

The sill course of panelled arcade over this octagonal moulding, will be of such dimensions and section as architect shall direct.

A panelled arcade of seven to eight arches, supported by pillars, with plain caps and bases, will be carried along two sides of each tower—32 panels in all; they will be sunk of such depths as the architect shall direct:

Moulding over arcade and splayed sill course.—Over this arcade a label mould with a splayed sill course, having in it one break and being a continuation of the buttress caps, will be carried around three sides of each tower, of such dimensions and section as architect shall direct.

Above the sill course, the sills of the upper windows, which will be 15 inches high and of such section as architect shall direct, will be carried. They will be well cut.

Windows, 3d tier.—The third tier of windows will vary in the two towers per plans; there being a double window on each of the four sides of the larger tower, and a triple one on each of the four sides of the lower tower. The section of all the jambs will be as shown on plan A, Nos. 7 and 8, and they will be of such dimensions as the architect shall direct. All the columns of all the above jambs will have plinths and bases of good designs and foliage Norman caps, approved by architect. The arches will have the same section as the jambs, except over the pillar caps, where the circular shaft will be replaced by an octagonal moulding.

Finish of lower central front tower, above 3d tier of windows.—1st. A corbel course projecting 10 inches from the face of the wall, of semicircular corbels, supported on brackets, will be carried all around the four sides of the tower. Over this an octagonal moulding; over this a zigzag or panelled moulding, of such dimensions, pattern, and workmanship as architect shall direct, well sunk; over this zigzag or panelled moulding, an octagonal moulding—then a vertical band; over this band a $\frac{3}{4}$ circle; and over this a cove, with an octagonal or splayed top for the cornice or coping.

All the above mouldings to run all round the four sides of the tower, and to be of such dimensions, workmanship, and design, as architect shall direct. The upper bed of the upper stone or coping will be at least 30 inches, with a groove sunk one inch all round, to secure the roofing material, to prevent all leakage.

Finish of larger front tower above the third tier of windows.—Four circular windows for clock faces, one on each side of the tower, of a diameter not exceeding nine feet, will be placed over each set of double windows. The jambs will be of the section shown on plan A, No. 14, and in the mouldings the numbers of the hours will be cut. The windows will be filled with handsome Norman tracery of pillars, and semicircular arches of such dimensions, &c., as architect shall direct.

Splayed corners.—Above these circular windows the tower changes the form of its ground plan from that of a square to that of an octagon, by means of four splayed corners, (per plans;) these corners will be of coursed cut stone, well cut on the beds, builds and faces, 12 inches high in each course, and having a drip mould cut on the under side of each stone to prevent the water from getting into the joints.

An octagonal moulding will be carried all around the base of the octagon at the point where the splay ceases. This moulding will be fine cut, and not less than 12 nor more than 16 inches in height.

Pinnacles.—An octagonal moulding of similar dimensions to the one above will be carried all around the top of the 16 buttresses of the principal tower; and on each of the buttresses an octagonal or cross-shaped pinnacle, having a plinth, pillars with caps, bases, and arches, and mouldings. Arched panels, corbels, and mouldings of such dimensions, design, and workmanship, as the architect shall direct. The pinnacles will be each capped by a single stone, having the form of an octagonal pyramid, of such dimensions as architect shall direct, surmounted by a handsome finial. All the above work to be cut in the best manner.

A sill course of octagonal form will be carried around the whole tower, under the sills of the fourth tier of windows, of such dimensions as architect shall direct. Sills of the windows of the octagonal section will be 15 inches in height, and of such depth as may be directed by architect.

All the windows of the octagonal section will have jambs of such section as architect shall direct, and detached columns not more than 12 inches lesser diameter, of oval form, will divide the windows into two bays.

The columns of the jambs and the central columns, or mullion, will have plinths and bases of good design, and ornamented Norman caps, of such dimensions and pattern as may be approved by architect. The splay of the jambs will be continued around the arches; the tracery of the window heads will be sunk through single stones of not less than nine inches in thickness; the arris of the arches will be splayed, and the quatrefoil over them will also be sunk through, and the whole will be fine cut, per directions of architect.

All the corners of the octagonal section of the tower will leave an arris drawn on them, so that they will be perfectly plumb, true, and even, in every respect.

A corbel table will be carried around the octagon over the arches of the fourth tier of windows, per plans, with handsome brackets neatly moulded under semicircular arches, which will project from 10 to 12 inches.

Over this corbel table a splay fillet and octagonal moulding will be carried to the under side of the ornamental band, of such dimensions and workmanship as the architect shall direct.

Over this octagonal mould an ornamented course, having a zigzag chevron, or a star or enriched lozenge or triangular frette, of such dimensions and pattern as architect shall direct, and well cut, will be carried.

Above this a series of six mouldings, of such dimensions and pattern as the architect shall direct, and terminated by an octagonal moulding 16 inches high and 30 inches bed, for a cornice, with a rabbet to receive the lead connecting the roof covering with the stone, will be carried.

Parapet of tower.—A parapet 3 feet 6 inches in height, with a moulded base and octagonal coping, will be carried all around the top of the tower, over the cornice. All the stones between the base and coping will be 15 inches thickness of bed, and fine cut on both faces and both beds, as will the coping and base. The whole to be of such proportions as the architect shall direct.

The buttresses of both central front towers will have an arris or draught. fine cut, drawn on all the corners, so that they will, when laid, be perfectly plumb, true, and even.

All the mouldings, buttress caps, base courses, and in general all the ornamental work on the buttresses, will be well cut and of such dimensions and design as architect shall direct. And all the work on both front towers, the porch and space between the towers, to be cut and furnished, whether specified or not.

In each of the walls between front towers and main building, there will be a door four feet six inches opening, and ten feet six inches high in the clear. Their jambs and arches will be of the following section, (see plan A, No. 18,) and well cut, and the columns will have bases, plinths, and foliage. Capitals of such design as may be approved of by the architect. The bands and corbel courses, and battlements of the front of the central buildings, hereinafter described, will be continued along these walls to the rears of the central front towers, a total length of 14 feet each.

Windows.—In each of the above spaces there will be three windows, averaging ten feet high, and four feet broad in the openings, with arches and jambs of section (plan A, No. 17) well and truly cut, and of such dimensions as architect shall direct.

Cut stone in front and rear of central building.

Two bases, their courses of section described, will be carried around both of the fronts and buttresses.

Buttresses.—The corners of all the buttresses will be dressed with a draught or arris, so that they will be perfectly plumb, true, and even, when laid.

Buttress caps will be gable-shaped, and project one foot to sixteen inches from the corbel table behind them. They will be well and truly cut, with a circular bead on the apex, and of such dimensions, &c., as architect shall direct.

Band under windows.—Under the first tier of windows a moulding, consisting of a splay, or cove, a fillet, and an octagonal moulding, of such dimensions as architect shall direct, will be carried.

The window-sills of the first tier of windows will be 10 inches high, well cut, with a rebate to receive the sash.

The jambs of the windows will be cut to the form of a splay and column, in a rebate, and of such dimensions as architect shall direct. All the columns to have plinths and bases, handsomely moulded, and foliage Norman caps of such design as architect shall approve.

The arches of the windows will be of the same section as the jambs, with the exception that the circular moulding, or shaft of column, will be replaced by an octagonal one.

Labels resting on ornamental corbels, of handsome design, will be carried over the heads of all these windows.

A corbel table of semicircular arches, supported on handsomely carved drops, will extend from buttress to buttress, along the whole front and rear. The projection of this corbel table will be from eight to ten inches.

The octagonal sill-course under the sills of the second tier of windows, will be cut to such dimensions as architect shall direct.

The sills of the second tier of windows will be from 16 to 18 inches in height, and cut per plans and directions of architect.

The window jambs will be cut to the form of a splay and octagonal, or oval column, in a rebate, of such dimensions as architect directs.

The columns in the centre will be of the same shape as those of the jambs, and of such dimensions as architect shall direct. All the above columns to have plinths, bases, and foliage capitals, of such design as architect shall direct.

The splay of the jamb will continue around the arch, and a handsomely moulded label, with two carved foliage corbels, will be carried around the arches. Tracery will be of the form shown on plans, at least nine inches thick, and moulded on all the edges. The space between the pointed arches of the tracery will be sunk two inches on both sides from the face of the arch, and a trefoil will be sunk through it, if so directed by architect.

A corbel course of large size, projecting from 15 to 18 inches from the face of the walls, will be run all along both front and rear; the corbels will have semicircular arches, supported by handsome moulded drops, and will be of such dimensions and design as architect shall approve.

Over the corbel table a moulding, consisting of a splay and fillet, will run all around, if so directed by architect. This moulding is not shown on plans.

Above this line the battlements will be carried along the whole front and rear of the building. The battlement will be well cut; and where it is above the roof, will be 16 inches in thickness, and cut on both sides. The coping of the battlement will be cut to the section shown in plan A, No. 16, and of such dimensions as architect shall direct, and the battlement shall be 18 inches higher than shown on plans.

All the remaining cut work, and stone therefor, necessary to finish completely the front and rear of the central building, will be furnished by the contractor, whether specified or not.

East end of central buildings.—The band under the windows will extend along the whole end of building, between the towers, and will be cut to the form of five sides of an octagon, of such dimensions as architect shall direct.

Buttress corners will have an arris drawn up them, as before described, for front and rear.

Triple window.—The triple window will have a sill 15 inches in height, and of such other dimensions as architect shall direct.

The jambs and intermediate jambs will be of the section shown on plan B, No. 1, and of such dimensions as architect shall direct.

All the columns in the jambs to have plinths and bases, and capitals, with Norman foliage. The arches will be of the same section as the jambs, with an octagonal moulding, taking the place of the shaft of the column. A label mould, of the form of five sides of an octagon, will be carried all around the heads of the three windows, from the level of the caps of the columns of the side windows, and four handsomely carved corbels will be carried on the level of these caps, from which the label will spring.

The smaller end windows will have sills, jambs, arches, bases, capitals, plinths, corbels, and labels, of the same section as the triple window.

Corbel course.—Along the whole end, and its gable, a handsome heavily-sunk corbel table, of semicircular arches, springing from handsomely-carved brackets or drops, will be carried. It will project from 12 to 15 inches from the face of the wall.

Coping.—An octagonal coping, at least 15 inches high and 30 inches to bed, will be carried along over the whole end wall, with a proper groove for roof covering, sunk in build.

West end of main building.—A sill course of octagonal form will extend along the whole end between the towers.

The arris of buttresses, and arched panels over them, will be dressed perfectly true and even.

Circular window.—The jamb will be cut to the section, (plan C, No. 1.) The tracery will be cut on both faces, with columns, with plinths, bases and caps, quatrefoils, six-foils, and trefoil, tracery heads and mouldings, of such design and dimensions as architect shall direct, and be complete in every respect.

A corbel course will be carried up the gable of the centre compartment, of such design, workmanship, and dimensions, as architect shall direct.

Two windows at sides of circular windows will be furnished with jambs, arches, &c., cut in same way as described for windows of east end.

The two small circular windows will have jambs of the section shown in plan C, No. 2.

The quatrefoil tracery will be eight inches thick, dressed on both sides, and splayed on edges.

A hook label mould will be carried along the whole end under the parapet.

The coping will be similar in every respect to that of east end. And all the above to be of such dimensions and wormanship as architect shall approve.

Towers of east end of main building.

CAMPANILE.

The campanile, a larger tower, will consist of four stories, or external divisions. The two base courses, hereinbefore described, will extend all around it.

The jambs of the doors will be cut to the section of two rebates, with one engaged column in one of them. And there will be four windows, (not seen on plan,) in the first story, with sills, splayed jambs and arches. A splayed water-table will be carried all around under the second story.

Second story.—On each side of the second story there will be two panels, with arched heads, formed by buttresses, which will project from six to eight inches from the face. The corners of the tower buttresses and arches will be dressed perfectly true and even, so as to be perfectly plumb, when laid.

Windows.—In each of the panels there will be three windows with splayed sills, jambs and arches.

Cornice of second story will consist of a splay, or an ogee, a wide band, and an octagonal moulding, all cut in the best manner.

If the architect shall so direct, the splay or ogee shall be replaced by corbels.

Third story.—A base course, with splayed top, will run all around the tower.

The eight windows of third story will have sills ten inches in height.

The jambs will consist of a splay and column in a rebate, and the mullions of a column on a pilaster.

The arches will be of the shape of a trefoil, of the same section as the jambs, and the tracery, with splayed angles and panels, will be carried from capital to capital of the columns, per plans and directions of architect. All the columns will have bases, capitals, and plinths, handsomely carved and moulded.

Over the windows a corbel course of ten corbels or modillions, on each side of the tower, will be carried; the corbels will be handsomely cut and moulded, (not shown on plan.)

Over the corbels an octagonal moulding will be carried, of such dimensions as architect shall direct.

Fourth story.—A splayed base course will be carried all around the fourth story of the tower.

The window-sills of the eight windows of the fourth story of the tower will be 10 inches high. The jambs and centre mullions will be cut to the same section as those of the third story.

The tracery will be eight inches thick, splayed on corners with a quatrefoil pierced through each tracery head over the arches.

Over the fourth story there will be, first, a moulding consisting of a splay and a fillet. Over this a zigzag or chevron mould, well sunk; over the chevron a fillet, and an ovolo supporting a corbel course of semicircular arches on plain brackets, projecting from eight to twelve inches from the face of the wall.

The coping of the tower will be octagonal, 12 inches high by 24 inches bed, and grooved to receive the roof covering.

All the parts of the above tower, including doors, buttresses, bands, corbels, mouldings, windows, &c., to be of the dimensions, workmanship, and design furnished by architect.

Smaller tower of east end.—Base courses to be carried all around.

The tower will consist of three stories externally; the lower one being square, and the two upper ones octagonal.

First story.—A sloping base, eight inches high, will extend along the bottom of the panel, between the buttresses on each side.

The sides of the first story will each have a panel with circular head, formed by buttresses and arches, projecting six inches from the face of the wall, and all the angles of the tower and buttresses will be dressed perfectly true and even.

Windows.—On each side of the first story there will be two windows, with splayed sills, jambs, and arches, which will be well and truly cut.

An octagonal moulding will be carried around over the top of the first story.

Splays.—The square of the first story will be gradually drawn into an octagonal form by four splayed corners, which will be of cut stone, with drips on under side, of same character and workmanship as described for the main central tower.

Windows of the second story will have sunk jambs and arches, cut perfectly true and even.

A hook label moulding will be carried around the top of the second story of the tower. The parapet or broad band over this story will be of cut stone. A splayed coping will be carried over the parapet and under the third story.

An octagonal sill course will be carried around the tower under the window-sills of the third story.

The window-sills of the third story will be eight (8) inches in height.

The jambs and arches of the windows will be splayed, or of the section of a rebate, with an engaged column; all the corners of the tower will be cut perfectly true and even.

A corbel course will be carried around the tower, forming the first member of the cornice; it will be of semicircular arches, supported by plain brackets, and will project eight inches from face of tower wall. Over this corbel cornice a splay moulding will be carried. And over the splay the cornice will consist of five members of such design and dimensions as architect shall direct. The top bed of the upper member or coping shall be two feet wide, with a groove cut to attach the roof covering.

All the parts of the above tower to be of such workmanship, dimensions, and design, as the architect shall direct.

Towers of west end of main building.—Octagonal tower of southwest corner will consist of four stories externally.

The two base courses will be carried around the first story. Above the base courses the first story will be battered, per plans, and all the corners will be dressed so as to be perfectly true and even. A splayed water table will finish the first story.

Second story.—All the corners will be dressed true and even, so as to be perfectly plumb, when laid.

Windows.—There will be two windows in each side with splayed sills, jambs, and arches.

Loop-holes.—There will also be one cross-shaped loop-hole in each side, sunk through the walls and cut perfectly true and even, with trefoils on the ends of the arms.

A hooked label mould will be carried around the tower, and well cut. The parapet of the first story, over the label, will be a broad band of cut stone, finished on top with a splayed coping.

Third story.—The base or sill course of the third story will be well cut and splayed on upper edge.

The windows of the third story will form a continuous arcade all around. The jambs and the centre mullions will be cut to section shown on plan D, No. 1.

All the columns will have plinth bases and foliage Norman caps. The section of the arch will be same as that of jamb, except that a square or octagonal moulding will take the place of the shaft of the column. The tracery will be eight to ten inches thick, the arches will be raised, and over them a quatrefoil pierced through the panel in the head of each tracery.

A corbel course of small moulded corbels, seven on each side of the tower, well cut, will be carried around under the cornice of the third story. The cornice of the third story will be octagonal and well cut. The whole story will be eighteen inches higher than shown on plan.

Fourth story.—The base course will have a splayed top mould or water table on which the widow sills will rest.

The window sills will be six inches high. The windows of the fourth story will also form a continuous arcade. The jambs will be cut to the section shown on plan D, No. 2, and the arches will be of trefoil form, and cut per directions of architect. All the columns will have plinths, caps, and bases of good design.

A hook label mould will be carried around under the parapet.

The parapet will contain two sunk panels on each side, each of which will be of handsome Norman patera, of such design as may be approved by architect. The parapet will be sixteen inches thick, and dressed on both sides, and will be coped by a coping twenty inches bed, cut to the section shown on plan D, No 3.

A balustrade of columns, with caps, bases, arches, &c., will fill the spaces between the jambs of the windows of fourth story, per end view.

The northwest corner tower will be divided externally into three stories.

The first story will be similar to that of the southeast corner tower.

The second story will be square with splayed corners, handsomely cut; it will rise from a splayed base mould, and have two windows with rebated jambs on each side. The cornice of the second story will be a hook label mould, over which will be a plain parapet, with splayed coping well cut.

Third story.—The base course will be well cut, with a splayed top.

Windows.—There will be four windows, with sills 10 inches high, well cut. The jambs and arches will be a splay and column in a rebate, with handsome plinths, caps, and bases. The centre mullion will be a column on a pilaster. The tracery will be eight inches thick, with raised arches, and a quatrefoil pierced through the panel in the head.

In the gables over the windows a sunk quatrefoil panel will be cut.

The coping will be a hook label mould, 18 inches bed, grooved as usual to receive the roof covering, and a neat finial will be cut for each gable.

Central rear tower.—The two base courses will be carried all around the buttresses, &c. All the corners of all the buttresses will have an arris run along them. All the mouldings and buttress caps will be cut in the best manner, and of most approved design.

Door.—The door jambs will be of the section of four rebates, containing four detached shafts or engaged columns, having bases and plinths handsomely moulded, and capitals cut in the best manner, with Norman foliage, well sunk and undercut; (see plan D, No. 4)

The arch will have four Norman mouldings, two of which will be ornamented with a chevron and cable mould; (see plan D, No. 5.)

A label of octagonal form, and ornamented on the lower face with a Norman leaf, will be carried over the arch of the door, and will spring from two foliage corbels of best design and workmanship.

Bay window.—The bracket of the bay window, which will project not less than six feet six inches from the face of the wall, will consist of a series of mouldings rising from a large carved corbel. All the face work of the windows between the corbel and the sills will be well cut in both faces and both beds, to a thickness of 13 inches.

An octagonal sill course will be carried all around the tower on a level with the under side of the sills of the bay window. The window sills will be 10 inches high, cut in the best manner.

All the face work of the bay window above the sill course will be fine cut.

There will be three windows, one on each side of the bay. The jambs and mullions will be of the section shown on plan D, No. 6.

All the pillars will have plinths, bases, and foliage caps. The arches of the tracery will be raised, and a quatrefoil will be pierced through the sunk panel over them. The tracery will be nine inches thick. The arch of the window will be of same section as the jamb, except a square will take the place of the shaft of column. Over the windows a double label mould will be carried all around the bay window, and above this line there will be a battlement cut in the best manner, and of good design. The battlement will be cut on both sides.

Sides of first story of tower.—On each side of the small octagonal tower a window with splayed jambs, arches, and sills, will be cut, and two similar windows will be placed on the opposite side.

On each side of the octagonal tower in the second story a window with rebated jambs, having each an engaged column, will be cut in the best manner; and there will be two similar ones on the opposite side of tower, between which a niche, having a foliage corbel and canopy, cut in the best manner, will be placed.

A hook label mould of large size will be carried all around the top of the second story, and well cut.

Third story.—The base course of the third story will be splayed on upper bed, and well cut.

The front and rear will each contain a single large window, having a jamb with the section of a splay, and engaged column in a rebate, and a mullion or central column supporting tracery. The tracery arches will be raised, and a quatrefoil pierced through the sunk panel.

Over the arch of the window there will be an octagonal label resting on two handsome corbels, which will be well cut. All the columns to have bases, plinths, and foliage caps.

The sides of the third story will each be pierced by two windows, having splay and column in a rebate for the jambs and arches.

Battlements, &c.—The machiolations under the battlement will project two feet from the face of the wall, and will be formed of semicircular arches, springing from moulded corbels; above these will rise the battlement, well cut on both sides, 20 inches in thickness, and coped with a heavy moulded coping, (per plan of architect.)

The octagonal stair tower attached to the above will have cross-shaped loop holes and slits to light the stairs from top to bottom. All the mouldings of the main tower will be carried around it, and it will be finished at the top by a battlement with cross-shaped loop-holes. A door for entrance, with plain rebated jambs, will be placed in one side of this tower on the level of the ground, with proper sills, &c.; and all the corbels and other mouldings of the tower will be well cut.

East connecting range—cloister.—The front of the cloister will be a continuous arcade of six-arched openings filled with mullions and tracery. The section of the jambs and mullions will be as shown on plan A, No. 15.

All the columns will have plinths and bases handsomely moulded, and foliage capitals of best description.

The tracery in the heads will be nine inches in thickness, with raised arches, and the panels over these arches will be pierced with quatrefoils. An octagonal label resting on handsome corbels will be carried over the arches.

The cornice will consist of a corbel table of semicircular arches resting on moulded corbels, projecting at least 10 inches from the face of the wall. The coping will be octagonal, 18 inches bed, with grooves, &c., as usual. The arches of the cloister will rest on a sill 12 inches thick and 30 inches bed. Underneath the sills an octagonal moulding will be carried.

There will be six small windows with splayed jambs, one under each of the above arches, to light the basement, and two base courses, as usual.

North front of connecting range behind cloister will be finished with eight windows, with jambs and arches of section of a rebate with engaged column or a splay, and of same dimensions as those of the south side.

South front of connecting range will consist of seven bays, divided by buttresses projecting 8 to 12 inches from the walls.

The two base courses will be carried all around the buttresses and walls.

An octagonal sill course will be carried along under the windows. The sills of the windows will be six inches high. The section of the jambs and windows will be of a rebate and engaged column or a splay, with bases, plinths, and capitals to the columns. The arches will be of same section as the jambs, with an octagonal moulding instead of the shaft of the column. Over the heads of the windows an octagonal label mould rising from two moulded or foliage corbels will be run.

A corbel course, projecting from 10 to 12 inches from the face of the wall, will be carried from buttress to buttress. The corbels will consist of semicircular arches rising from moulded dentils. The coping will be octagonal.

A small window with splayed jambs, sills, and arches, will be cut for each compartment, and they will be placed underneath the windows above described.

Above the coping there will be a battlement three feet high, with openings for windows alternating with carved panels. This will be coped with an octagonal coping of 18 inches bed, with a groove for the roofing material cut in it. This is not shown on plans.

East wing.—The basement of the east wing will be battered, per plans.

Windows.—There will be 14 windows in the basement, with splayed or rebated jambs, sills, and arches.

The basement will be coped with a water table 12 inches in height, splayed on the upper bed.

Windows front and rear of wing.—An octagonal sill course will extend along the front and rear under the window sills. The window sills will be nine inches high.

The jambs of the windows will be a splay and engaged column in a rebate, with a mullion, as hereinbefore described, and tracery in the head with raised arches and pierced quatrefoil, and an octagonal label mould will be carried around each arch, resting on two handsome corbels. The plinths and bases of the columns and foliage capitals will be well cut and moulded.

A porch, with four steps of 7 inches rise by 12 inches tread carried all around it, will serve for the east entrance to the wing. A water table with splayed top bed will extend all around the porch.

The door jamb will be cut to the section of a splay, and engaged column in a rebate, with plinths, bases, and foliage caps. The arch will be well cut, and a label will be carried around over the arch, resting on two handsome corbels.

The cornice will consist of 16 corbels or dentils, handsomely moulded, supporting a well-cut parapet, surmounted by an octagonal coping of 16 inches bed.

The *vestibule* will have a water table similar to that of the porch carried round it; over the porch will be a window with a jamb of the section of a splay and engaged column in a rebate, with a centre mullion, tracery with raised arches and pierced quatrefoil, and an octagonal label mould resting on two corbels, all cut in the best manner, with plinths, bases, and capitals, as hereinbefore described. The window sill will be eight inches in height. On each of the sides of the vestibule will be a double window with splayed jambs, and arches, and sills. An octagonal label, resting on three plain corbels, will be run around the arches.

A corbel course, projecting from 8 to 10 inches from the face of the wall, will be carried all around the sides and gable of the vestibule. It will consist of semicircular arches resting on handsome moulded brackets. The cornice will be octagonal, 18 inches bed, and a handsome finial will be cut and placed on the apex of the gable.

East and west sides of east wing will be finished precisely alike, except where the west side is covered by the connecting range, and with the exception of the central bell tower, which will be only on the east side. The interlaced arches will be carried through the west side from chimney to chimney.

The ten small windows, on each side above water table, will have splayed jambs, arches, and sills.

The four large triple windows will have sills eight inches high. The jambs and mullions will be of the section shown on plan E, No. 1.

The columns of the jambs will have plinths, bases, and foliage capitals; and from the abacus of the capital an octagonal label mould will be carried around the head of the windows.

Chimneys.—Six chimneys springing from handsomely moulded brackets, and projecting two feet six inches from the face of the wall, with splayed corners well cut, will be carried from the water table to the height shown on plans. They will have octagonal mouldings, splayed cornices, and pierced windows, with battlemented tops of dimensions and workmanship directed by architect.

Interlaced arch.—Between the chimneys on the west side, and between the bell tower and the chimneys on the east side, an arcade of interlaced Norman arches, resting on handsome columns with neat plinths, bases, and capitals, and 18 inches higher than shown on plans, and cut in the best manner, will be placed. The arcade will rest on an octagonal sill course, supported by handsome moulded corbels or dentils, and will be capped with a heavy hook label moulding, with an 18-inch bed grooved to receive the roofing.

Bell tower will be carried up plain to the height shown on plans, with the corners cut true and even, and with two roll mouldings projecting from the north and south sides.

A corbel course of plain corbels will be carried around the top of the first story.

The coping of the first story will be a fillet and splay 18 inches in thickness.

The base course of the second story will be splayed on its upper bed, and well cut.

The corners of the tower will be splayed.

The window sills will be eight inches high.

The widow jambs will be cut to the form of a splay and column, with plinths, base, and capital.

The arch will be of same section as jamb, with a square moulding, taking the place of the shaft of the column, and around the arch a label, rising from neat corbels, will be carried.

The cornice will be a splay and fillet, and will be coped by a plain coping, per plans.

Battlement of ends, &c.—The machiolations under the battlemen will overhang the walls two feet six inches. They will consist of semicircular arches, resting on handsome moulded corbels. Above this the battlement will rise; and where it is above the roof, it will be dressed on both sides, and 16 inches in thickness. The battlement will be coped with a handsome moulded coping.

Western connecting range—cloister.—The cloister will consist of three compartments, divided by buttresses, each containing a triple arched opening.

The two base courses will be carried along the front. In the basement seven small windows will be cut, with splayed sills, jambs, and arches.

An octagonal sill course will be carried under the sills of the cloister, with a bed and build of at least 24 inches, grooved to receive lead.

The buttresses between the triple arches will be well cut, and project eight inches beyond the walls above the arches. The pillars supporting the arches will be well cut, and will have plinths, bases, and handsome foliage caps, cut in the best manner. The arches will be of the section of a rebate and splay, and well cut on both sides.

A corbel course of semicircular arches, projecting eight inches from face of wall, resting on handsome moulded drops, will be carried between the buttresses.

The cornice will be octagonal, well cut, with a bed of at least eighteen inches, grooved as usual.

The front of the connecting range behind the cloister will have windows, cut similar to those of the south front.

The south front will be divided by buttresses into seven bays. The two base courses will run along the whole front. Seven small windows with splayed jambs, sills, and arches, will be cut for the basement.

An octagonal sill course will be carried under the sills between the buttresses.

The window sills will be seven inches high.

The jambs, arches, and labels of the windows will be cut in the same manner as those of the eastern connecting range.

The corbel table, between the buttresses and the coping, will also be cut in the same manner as those of the eastern connecting range.

Clerestory.—The inside columns, shown on ground plan, supporting the clerestory, will be of granite, rough cut, and twelve inches square, with a skew back on each, with a top bed of 18 by 36 inches to receive the arches which support the clerestory.

The clerestory will be divided by buttresses, projecting six inches from its face into seven bays, and in each bay there will be a double or triple window, with splayed jambs, arches, and sills.

A corbel table projecting six inches from the face of the wall, of semicircular arches, on plain moulded brackets, will be carried between the buttresses. The coping will be octagonal, 8 by 18 inches, with a groove, as usual.

West wing.—The bell tower will be divided into four stories, externally.

The first story, the door jamb and arch, will have a plain splay and engaged columns in a rebate.

Two small windows, with splayed sills, jambs, and arches, will be cut for the sides of first story.

The water table, under the second story, will be splayed on its upper bed.

The second story will have panelled sides, with semicircular heads, formed by the buttresses and arches, projecting from six to eight inches from the wall. All the corners of the tower, buttresses, and arches, will be well and truly cut. In each side of this story, there will be two small windows, with splayed sills, jambs, and arches.

Under the coping of the second story, a corbel course of nine handsomely-moulded corbels or dentils on each side of the tower, will be carried.

The octagonal coping will be well cut.

The base course and water table of the third story of the tower will be well cut.

Windows of third story.—The four windows of the third story will have sills seven inches high.

The jambs will be of the section of a splay and engaged column in a rebate, with handsomely-moulded plinths, bases, and foliage caps.

The tracery will be a trefoil head, well cut, and eight inches thick. The arches will be splayed, and an octagonal label resting on two handsome corbels will be carried round the arches.

A corbel course of 44 corbels will be carried around the third story under the coping, which will be octagonal.

The base course and water table of the fourth story will be well cut.

The windows will have sills eight inches high.

The jambs of the four windows will be a splay and engaged column in a rebate. The mullion will be a column, all with plinths, caps, and foliage bases.

The arch and tracery will be well cut, and an octagonal label resting on two corbels will be carried around the arch of each window.

The cornice will consist of five mouldings:

1st. An ovolo or ogee moulding.

2d. A zigzag or chevron, deeply and well cut.

3d. A splay.

4th. A corbel course of semicircular arches, resting on foliage corbels and projecting from eight to twelve inches.

5th. A hook label mould for the coping, 15 inches high, and 18 inches lower bed, with a groove, &c.

Apsis, or semicircular projection.—The apsis will be divided by eight buttresses, projecting eight inches from the face of the wall, into seven bays.

The upper base course or water table will project eight inches.

A sill course of octagonal form will be carried around under the sills between the buttresses.

The sills of the windows will be seven inches high.

The jambs and arches will be a plain splay, or a rebate.

In each bay, between the buttresses, there will be a corbelling of two semicircular arches, rising from the sides of the buttresses, and supported by a handsomely-carved and moulded corbel in the centre.

A corbel course of handsomely-moulded corbels, or dentils, will be carried all around under the octagonal coping of the first story.

An octagonal coping or cornice will be carried all around over the first story of the apsis.

Base course of second story will be a plain band, splayed on upper edge to shed water.

Over this and under the columns a stylobate of cut stone will be carried, from eighteen inches to two feet in height, well cut on the upper surface, between the column bases, to form the sills of the windows between the columns.

An arcade of columns and arches, having 14 arched openings, will be carried round the second story of the apsis.

The columns will have plinths, bases, and carved capitals, and will be detached entirely from the wall behind them. The wall behind the column will consist of pilasters, with plain bases and capitals.

The pilaster will project eight inches from the face of the sash. The arches will be of the section directed by architect, and will be cut in the best manner.

The face work over the arches will be set back three inches from the face of the arches, and well cut.

A corbel table, of semicircular arches, resting on moulded brackets, will be carried all around the apse, under the coping, (not dentils, as in plan,) and will project from eight to twelve inches from the face of the wall below.

The coping will be octagonal, 12 inches by 24 inches, well cut, and grooved to receive roof.

The wall behind apse will have a label course run across it, on a level of the top of the roof of the apse.

Circular window.—The jamb will be of the section directed by architect, and well cut.

The tracery will be 18 inches in thickness, exclusive of the columns on the face.

The quatrefoils and six-foil will be pierced through, and well and finely cut.

The columns will have plinths, bases, and caps, well cut and moulded. The moulding on which the columns rest will be octagonal, and well cut, and all the remaining work of the window will be cut in the best manner.

Cornice of gable will consist of a splay, with a double billet-mould, a band eighteen inches wide, well cut, and an octagonal coping 12 by 24 inches, grooved to receive the roof covering.

A handsome finial will be well cut, and for the apex of the gable.

Buttresses will be cut with base courses, buttress caps with mouldings, and arres on the corners, cut in the best manner.

South front of west wing.—Base courses will be carried across the front, of size, &c., hereinbefore specified.

Two small double windows, with splayed jambs, sills, and arches, will be cut for each side of the door-way.

The porch will project one foot from face of wall: all the arres will be well and truly cut.

The door will have a jamb of the section of a splay and an engaged column in a rebate, and will be 18 inches in depth, to the front of the door, and 24 inches depth in all.

All the columns of the door will have plinths, bases, and foliage caps. The arch will have an octagonal mould, in place of a shaft of column. Over the door, the quatrefoil will be well cut and deeply sunk. The coping will be cut to the form of an octagon, 8 inches high by 24 inches bed, well cut.

The water table over the basement will be well and truly cut, and handsomely splayed.

Over the water table, the sill course under the windows will be carried from buttress to buttress, and will be well cut to the form of five sides of an octagon.

The sills of the windows will be 12 inches in thickness.

The jambs of the windows will be cut to the form of a splay and engaged column in a rebate.

The centre columns or mullions will be well cut, and all the columns will have plinths, bases, and foliage capitals, well cut.

All the tracery will be 19 inches thick, the arches will be raised, and a quatrefoil will be pierced through the sunk panels of the tracery heads. There will be three windows in the east front.

Circular windows.—The jambs will be splayed.

The tracery will consist of columns, with handsome plinths, bases, and caps, with trefoil arches between the columns; the spaces on the backs of the trefoil heads will be panelled; the thickness of the tracery will be eight inches. The moulding under the bases of the columns and the central quatrefoil will be well cut.

A corbel table will be carried up under the cornice of the gables, of semicircular arches resting on moulded brackets, and projecting 10 to 12 inches from the face of the wall. The coping will be 12 by 24 inches, cut to the form of five sides of an octagon.

A handsome finial will be well cut for the apex of the gable.

The buttresses will have the corners well and truly cut, with moulded caps, finished in the best manner.

Sides of west wing.—The east side of the west wing will be finished in precisely the same manner as the west side, except so far as it is covered by the connecting range.

The base courses will be carried all around.

There will be six small windows in the basement, with splayed jambs, arches, and sills.

The water table will be carried all around over the basement, per directions of architect.

The buttresses projecting eight inches from the face of the walls, and connected with arched heads, will be carried up perfectly plumb, true, and even, and all the arres of the buttresses and arches will be well and truly cut.

Sill course under the windows will be cut to the form of five sides of an octagon.

The sills will be eight inches in thickness.

The jambs and arches of the windows will be splayed or rebated.

A corbel course will be carried all around both sides of the building, of large semicircular arches, supported on foliage brackets. The corbelling will project from 10 to 12 inches from the face of the wall.

The coping will be 12 by 24 inches, cut to an octagonal form, with a groove to receive roofing material.

The walls connecting the central rear tower and the main central buildings will be cut with doors, windows, arches, corbel courses, mouldings, and battlements, precisely similar to those hereinbefore described; connecting the central front towers with main central building.

GENERAL SPECIFICATIONS.

All the window sills will be splayed.

All the doors will have sills and steps of the size, rise, and tread, directed by architect.

All the door and window sills will be well patent-hammered, and brought to a joint not exceeding 3-16 of an inch. All the jambs and arches, with the labels over them, will be fine cut and patent-hammered, and no spauls will be allowed on their faces. In the jambs and arches of the principal doors, the joints shall not exceed 3-16 of an inch. In the jambs, arches, &c., of the remaining doors, and of all the windows, the joints shall not exceed 3-8 of an inch. In all the capitals of all the columns the foliage will be well relieved and truly cut, and the plinths of the columns will be in some cases octagonal, and in others circular and square, and well cut.

All the bands and mouldings will be well and truly cut, or rubbed.

All the ornamented bands and mouldings will be well relieved, and truly cut, or rubbed.

All the moulded and ornamented corbels will be cut in the best manner. The foliage will be well relieved.

And all the battlements, labels, buttress caps, and all the remaining cut work, will be executed in the most true and perfect manner.

All the cut work hereinbefore specified, of every description, will be of the form and dimensions and according to the plans furnished by the architect.

Contractors are referred to the following architectural works for the character of the different mouldings, capitals, and other ornaments, used in the building.

Doors, windows, and cloisters.—For capitals, bases, and plinths, see Moller's Denkmahler, part I, plate VI. Door of cathedral of Mayence, (A,) plate IX. Details of columns, cathedral of Mayence, (B,) plate XI. Door of church of St. Leonard at Frankfort, (C,) plate XII. Door of the sacristy of the cathedral of Mayence, (D,) plates XIV, XV, and XVI. Details of the cloister of the church of Aschaffenburg, (E,) plate XVII. Details of the church of St. Paul at Worms, (F,) plate XVIII. Details of the doors of the transept at Frieburg cathedral, (G.)

Also, Pugin and Le Keux's Normandy, plate V.

Also, Glossary of Architecture, plate 28; St. Nicholas, Caeu, and St. Peter's, Northampton.

For corbel courses.—See Pugin and Le Keux's Normandy, plates 1, 10. Than church, plate 1, and Glossary of Architecture, plate 37.

For ornamented mouldings.—See Glossary of Architecture, all on plates 76, 77, and 78. Plate 79—cable, intersecting and cable, nail-head, star, lozenge and enriched lozenge. Plate 81—reticulated, diamond frette, and embattled frette. Plate 82—trellis and hollow square.

The above references are made with a view of presenting to the contractor the general style for the finish and character of the ornaments.

As the above specification, with the plans, is intended to cover the entire completion of the building, in every respect, in the most perfect manner, no extra claims will be allowed, unless caused by actual alterations in the plans. And the contractor will be bound by the sum of $10,000 to submit all questions, controversies, and claims to the architect, whose decision upon the same shall be final and conclusive between the parties.

Specification of the carpenter's and joiner's work for the Smithsonian Institution.

TIMBER.

Basement story.—The floors of the basement of the west wing, and west connecting range, will be supported on yellow pine timber, 3 by 12 inches, set two feet (2 ft.) from centre to centre.

First story.—All the floors of the first story, except those of the chemical lecture-room, students' working laboratory, front towers, campanile tower, octagonal tower, and central rear tower, will be supported on 3 by 12 inch timbers, of the best white pine, set sixteen inches (16 in.) from centre to centre. The girders into which these will be framed will be twelve inches (12 by 12 in.) square. The trimmers and trimmer beams will be 5 by 12 inches, and one trimmer will be placed at every hot-air flue, or one at every pier in the wall of the building. There will be one longitudinal trimmer in the west wing, one in the west connecting range, four in the library, three in the central hall, three in the lecture-room, and two in the east connecting range.

Second story.—The timbers in the floor of the second story will be 3 by 12 inches, set 16 inches from centre to centre. The girders will be twelve inches square (12 by 12 in.) running longitudinally through the museum. The trimmers and trimmer beams will be 5 by 12 inches. The timbers will be of the best white pine.

Towers, &c.—All the floors of the towers will be of the best white pine timber, 3 by 12 inches square. There will be seven floors in the higher central front tower; five floors in the lower front tower; four floors in the central rear tower; seven floors in the octagonal tower; seven floors in the campanile tower; five floors in the tower of the west wing; two floors in the porch of the chemical lecture-room.

The floor-beams of the galleries of the museum, library, and lecture-rooms will be 3 by 10 inches, of the best white pine timber, set 16 inches from centre. The girders of the gallery fronts, 8 by 12 inches.

All these timbers and girders will be firmly anchored to the walls.

All the floors in the building will have one row of herring-bone bridging of joists, 3 by 4 inches, for every 12 feet of length of beam.

Columns.—There will be 56 columns, six inches square and twenty-two (22) feet high in the library, set per plan.

In the great lecture-room there will be 10 columns of iron, twenty-seven (27) feet high. (Plan No. 1.)

In the museum there will be 120 columns, six inches square, and 27 feet high.

Roofs.—The roof of the central building to be framed with a tie beam, one king-post, two queen-posts, and four strutts.

The timbers in all of the frames will be of the following forms, dimensions, and materials:

Tie-beam, 6 by 15 inches, of the best white pine.

Two rafters, 6 by 12 inches, of best white pine.

King-post, 6 by 8 inches, of best white oak.

Two queen-posts, 6 by 6 inches, of best white oak.

Four strutts, 6 by 8 inches, of best white pine.

The roof plate will be 3 by 12 inches, of best white pine.

The purlines will be of the best white pine timber, 3 by 10 inches, set three feet (3 ft.) from centre to centre, quartered into the rafters two inches, (2 in.) and kept from slipping by brackets of white pine eighteen inches (18 in.) in length, firmly fastened to the rafters.

The roof of the east lecture-room will be framed in the same manner as that of the central building, of timbers of the same size and material. Its span will be forty-nine feet, (49 ft.) and the number of frames seven (7.)

The roof of the east connecting range will also be framed in the same manner, of timbers of the same size and material. The number of frames in it will be six (6.)

The roof of the western wing will be framed in the same manner, and with timber of the same description, but of the following dimensions: tie-beam, 4 by 12 inches; rafters, 4 by 10 inches; king-post, 4 by 8 inches; queen-posts, 4 by 6 inches; strutts, 4 by 6 inches; purlines, 3 by 10 inches; set three feet (3 ft.) from centre to centre. The number of frames in the west wing will be six (6.)

The roofs of the side aisles of the gallery of art, and of the cloisters in front of the two connecting ranges, will be framed according to section. (Plan E, No. 3.)

Tie-beam 3 by 8 inches, rafter 3 by 12 inches, strutt 3 by 6 inches, upright 3 by 6 inches, all of the best white pine timber.

There will be six frames in each side aisle and cloister.

The roof of the clerestory of the gallery of art will be framed of the following dimensions and materials:

Tie-beam, 5 by 12 inches, best white pine.

King-post, 5 by 7 inches, best white oak.

Two rafters, 5 by 10 inches, best white pine.

Two strutts, 5 by 6 inches, best white pine.

The purlines will be 6 by 10 inches, set three feet (3 ft.) from centre to centre. The number of frames will be six (6.)

The roofs of the square towers will be framed in the form of a flat hipped roof, with diagonal and square tie beams, king post, strutts, rafters, and purlines, of the same materials as above, and of dimensions suited for their respective spans.

The roof of the octagonal tower will be framed in a similar manner.

The roofs of the other towers will also be framed with diagonal and square tie beams, and hip-rafters, curved to the shape of roofs, and stongly braced with diagonal braces, strutts, and uprights throughout.

All the remaining roofs, if any, including those of the porches, &c., are to be framed in such manner, and of such dimensions, timber, and workmanship, as shall be directed by the architect.

Deafening.—All the floors except those of the chemical lecture-room and students' working laboratory, and other fire-proof rooms, will be prepared for deafening, with strips and plank, in the best manner.

FLOORS.

Basement.—The floors of the basement of the west wing, and west central range, will be of the best Georgia yellow pine narrow plank, not more than five inches (5 in.) wide, laid in courses, and blind-nailed.

First story.—The floors of the library, lecture-room, cloisters, apparatus room, campanile tower, and in general all the floors of this story, except such as are directed to be tiled or flagged, and including the cloisters and side slides, which will be planked under the flagging, will be of the best clear Georgia yellow pine, narrow, 1¼ inch plank, laid in courses not more than five inches (5 in.) wide, and blind-nailed.

Second story.—The floor of the museum will be laid, first, of 1¼ inch narrow white pine plank, over which will be laid a mosaic or tesselated floor of black walnut, yellow pine, white oak, maple, and other American woods, arranged in such patterns as may be directed by the architect. The upper floor will be blind-nailed to the lower one, and all its joints will be glued up strongly in the best manner.

Galleries, &c.—The floors of all the galleries of both stories, and all the floors of all the towers, will be of the best Georgia yellow pine, not more than five inches (5 in.) in width, blind-nailed, and laid in courses.

All the above floors will be of thoroughly seasoned 1¼ inch plank, planed, tongued and grooved, and laid in courses in the best manner. All the butts and joints will be planed true, after the floors are laid. The plank must be free from sap, shakes, and black or unsound knots; and when *clear* plank is specified, it must be free from all blemishes.

Roof.—All the roofs of every part of the building and towers to be sheathed with 1¼ inch merchantable white pine plank, mill-worked, and strongly nailed to the purlines. The sheathing to be free from sap, shakes, sun-cracks, and black or rotton knots.

Partitions and centres.—There will be a stud partition between the Regents' room and the rear staircase, which will be framed up of 3 by 4 inch joists, well bridged and trussed, and set twelve inches (12 in.) from centre to centre.

All the centres for the mason work, and stone-setting, to be furnished by the carpenter.

Furring.—All the outside walls, which are not lined with brick, to be furred with best 2 by 3 inch furring, set twelve inches (12 in.) from centre to centre.

Ceilings.—All the flat ceilings to be cross-furred with 1½ by 2 inch stuff, set twelve inches (12 in.) from centre to centre.

Groined ceilings.—The ceilings of the west wing, east wing, west connecting range and its cloister, museum, rooms in the front towers, and the room in the campanile on the museum floor, of the principal porch, the Regents' room, the staircases, vestibules, central hall, and library, will be groined and ribbed, per plans, sections, and directions of the architect.

These ceilings will be groined as follows:

West wing.—Divided by columns and arches into three (3) aisles, each of seven (7) sections of groining, and composed of an artificial clerestory, under the roof, lighted by sky-lights, and two side aisles. The apsis will also be handsomely groined.

West connecting range.—The gallery of art will also be divided into a central nave with a clerestory, and two side aisles, each containing seven sections of groining or twenty-one (21) in all. The cloister will also have seven (7) sections of groining.

The library will be divided by pillars and arches into five aisles, each containing seven sections of groining, not including the small groins between the pillars, which will be groined per plan and directions of architect.

The central hall will be in one aisle, containing sections of groining, per plans.

The staircases will be groined per plans and directions of the architect.

The east wing will be in a single aisle, handsomely groined.

The Regents' room will have one section of groining, and a groined ceiling to the bay window.

The museum will be divided by pillars into five (5) aisles longitudinally, with a transept or transverse aisle, at the centre, groined in a single aisle. Each of the longitudinal aisles will contain fifteen sections of groining. The transverse aisle will contain two sections of groining, in front of the longitudinal aisles.

The rooms in the front towers will have each groined ceilings.

The front and rear staircase halls will be groined per directions of architect.

The ceiling of the rear staircase hall will be groined per plans and directions of architect, as will also be the rear vestibule of the museum under the gallery.

The ceiling of the porch and vestibule, or stair hall of chemical lecture-room, one ceiling of campanile tower, and one ceiling on the first floor of the octagonal tower, will also be groined per directions of architect.

The ceiling of the principal porch will be groined per directions of architect.

The east cloister will be furred for a flat ceiling, with square panels and heavy ribbing.

The ceiling of the great lecture-room will also be panelled with heavy ribbing.

All the remaining ceilings in the building, and of the towers to the top, will be cross-furred.

Bracketing.—At the intersection of all the groins, as also when they meet the walls, and on all the rib lines shown on the ground plans, brackets for ribs will be formed in the best manner, to receive four (4) nails to each lath. Cornices will be bracketed out whenever required. All the pillars will be bracketed, as well as the half and quarter pillars, on the walls. Brackets for pillars will be set on the outside of all the wooden-door jambs, and at all the window jambs. There will be a boss or half-boss at every intersection of the ribs, all which bosses will be strongly bracketed, and in general all the bracketing necessary to complete the building will be furnished and put up.

All the above furring will be made of three thicknesses of $1\frac{1}{4}$ inch plank, strongly nailed and spiked together, and strongly hung from the floor and roof beams, by two inch plank.

All the brackets will be secured in the strongest manner.

Seats, &c.—The lecture-rooms and their galleries will have handsome settees of black walnut, with fronts carved to the shape of *old stalls* to each. The settees to have neat cap moulds and backs, and to be finished and carved in the best manner.

All the above black walnut will be oiled with the best raw linseed oil, three coats, well rubbed in.

Platforms and stage.—At one end of the great lecture-room a platform will be raised from 4 to 8 feet from the floor, for the length of one of the bays, to form a stage, and will have in front of it, and at the same level, an octagonal projection for the lecturer. The front of the platform will be wainscoated with narrow black walnut, $1\frac{1}{4}$ inch plank, tongued and grooved, and not more than four inches in width. The plank will be set on end, and will be neatly capped. On the projection a handsome carved table of black walnut will be provided, and a seat for the lecturer. Over the stage a canopy will be formed of joists, well framed, hanging down five feet from the ceiling, to conceal the rollers on which the illustrations are to be placed, and on each side of the stage a partition of joists (3 by 4 inches) will be carried out from the walls as far as the line of the front of the gallery, and terminating at the last pillar of the gallery. Thirty rollers of wood, six inches (6 inches) in diameter, and twenty-five feet (25 feet) long, will be hung behind the canopy. The rollers will have iron axles at their ends, working in iron eyes; and each roller will have a twelve inch sheave at one end for an endless cord to pass over, to work them. The ends of these rollers will also be concealed by a canopy of 3 by 4 inch joist hanging down five feet (5 feet) from the ceilings, and well framed.

Chemical lecture-room furniture.—A platform two feet (2 feet) high will be made, of strong joists and plank, raised from the front of the professor's front desk (A) to the rear of the room. On this the desk (A) will be placed, which will be of the dimensions shown on the plans, and will have drawers on all sides. The other desk (B) will be made in the same manner and similarly furnished.

Behind the front lecturer's desk a partition will be carried across, having sliding doors handsomely panelled, 3 inches in thickness, with proper fixtures, per plans. In the side of this partition, facing the lecture-room, there will be closets, with shelves, three feet in depth, and having sash doors, filled with good American glass.

The laboratory behind the lecture-room will be divided into two stories, connected by two flights of handsome staircases.

The first story will be divided into three apartments; the centre one of which will contain the working table (B) hereinbefore described, and will be shelved all around, except where occupied by doors and windows, to a height of eight feet. These shelves will be enclosed above a line three feet high, by panelled doors hung in boxes with weights, cords, and pulleys, like sash, and below that line the closets will be projected to form a table 15 inches wide, below which there will be a range of drawers about 6 inches deep, and below the drawers a range of closets with panelled doors. On the room to the right hand there will be two tables (A) two feet wide and eight feet long, made of three thicknesses of narrow 1½ inch white pine plank, not more than three inches in width, planed on both sides, tongued and grooved, and put together diagonally with glue and screws, and having strongs legs. The remaining part of the walls will be shelved off as in the preceding apartment.

On the room to the left there will be a working table (G) three feet wide and seven feet long, made similarly to those above described. The partition wall next centre will be shelved off as in the other apartments. Racks of shelves, with holes bored in them, will be placed on each side of the sink (F.) In the second story of the laboratory, which will also be divided into three apartments, the centre one will contain in the centre a series of shelves, resting like steps from the partition wall to the rear, to a height of seven feet. The walls will be shelved with shelves one foot in width, enclosed in sash doors hung with weights, cords and pulleys, like window sash, and, with the two remaining rooms, will be lighted with skylights of best double-thickness American glass in the roof, and interior skylights in the ceiling, with fancy sash, filled with best English crown glass, (A.)

In the east connecting range, which will be also divided internally into two (2) stories above the basement, the first story will contain a students' working laboratory, in the centre of which will be two strong tables in the form of the letter T, the tops of which will be of soapstone flags. These tables will be furnished with drawers, shelves and closets.

All around the sides of the rooms not otherwise occupied, there will be tables two feet nine inches wide with wooded tops, and drawers and closets; below and above these tables shelved closets, with sash doors hung with weights, cords and pulleys, will be carried to a height of eight feet from the floor. Stairs three feet wide, and well finished, will connect this laboratory with the second story. The second story above the laboratory will be divided into three apartments, one 15 by 14, as a private room for the lecturer; and the other two 12 by 25, one of which will have strong tables all around, and the other fitted with closets, drawers and shelves, with sash doors, as above, all around.

Sash and glass.—All the windows of every kind, size, and description, in every part of the building and towers, both interior and exterior, will be fitted with square sash, set diamond-wise, and filled with the best English crown glass. The windows will be hung in frames with cords, weights, and pulleys, and will be finished in every respect in the best possible manner.

Inside windows, balustrades, gallery fronts, carving, &c.—There will be two circular windows in the central hall (per plan of library) carved of the best white pine; also one triple or two double windows between the Regents' room and the rear stairway, and 12 triple windows in the clerestory of the west wing. These will be carved in the best manner, of the best white pine, according to the directions of the architect. All these windows will have frames and sash, and be filled with glass, as described above. Their mullions will be of wood, painted four (4) coats, to resemble the walls of the interior, and sanded.

There will be open balustrades three feet six inches (3 feet 6 inches) high, of black walnut, or of best white pine painted and grained, as may be directed, carried all around the front of the galleries of the museum and library, as well at the ends as at the sides, per plans. The balusters will be circular pillars with turned bases and carved capitals, supporting carved trefoil arches, over which a handsome moulded top rail will be carried, per plans.

The gallery front of the great lecture-room will consist of pillars with carved bases and capitals, as above, supporting semicircular carved arches, over and under which will be a large hook label mould well and deeply sunk, all of black walnut. At the distance of two inches (2 inches) behind this arcade, a wainscoating of one inch black walnut boards, not more than four inches wide, and set vertically, will be carried around to form the front of the gallery, and from the top of the label to this wainscoat a top board of black walnut 1½ inch thick will be carried, to form a book board for the gallery front.

The gallery front will be four feet six inches (4 feet 6 inches) in height.

The gallery fronts of the chemical lecture-room will be framed of strong 3 by 10 inch timber, which will be wainscoated on both sides four feet (4 feet) high, with ¾-inch black walnut boards, not more than four inches in width, capped on the outside with a handsome label, and having a label mould at bottom. And in general, all the work necessary to make the gallery fronts complete, is to be performed.

Stairs.—The principal front stairs will consist of two double flights, one on each side of the entrance hall. The steps will be five feet three inches (5 feet 3 inches) in width, and the well will be from eighteen inches to two feet (18 inches to 2 feet) in width. There will be a 7 inch square carved newel to each flight, with the sides handsomely panelled.

The balusters will be octagonal pillars, with turned bases and caps, having a semicircular arch with a trefoil head between them, and will be surmounted by a top rail, 4 by 6 inches, handsomely moulded. The stairs will have handsome coves and brackets hanging down below the underside of the steps. The steps will be supported by wrought-iron frames, properly put together to insure stability. The risers will be of the best white pine, and the treads of the best Georgia yellow pine. And the underside of the stairs will be furred ready for plastering.

The stairs will rise from the ground floor to a point four feet (4 feet) below the under side of the roof timbers, say a height of forty-three feet (43 feet) or thereabout. At this height the upper platforms or landings will be placed. At one end of each of these a door will be placed which will communicate with the front towers. A spiral staircase will be carried up from the level of these upper platforms to the top of the higher of the two front towers. This staircase will be six feet (6 feet) in diameter, and will be partitioned off in one corner of the tower. It will have proper platforms and doors of communication to the different stories of the tower, of which there will be four (4) above the roof of the main building. This staircase will open on the roof of the tower, which will be nearly flat, and is to be used as a place of observation.

A similar staircase will extend from the same level upwards to the floor of the upper story of the lower central front tower.

Both of the above stairs will have treads and risers of yellow pine, with handsome coves and nosings. They will be ceiled in with ½-inch white pine plank, will have windows in the partitions for light, and will have neat 3 by 4-inch black walnut hand rails, supported by iron elbows.

The principal rear stairs, about twenty-three feet (23 feet) in height, of rise and of the form and dimensions shown on plans, will be finished in a manner exactly similar, and of the same materials and workmanship, as the principal front stairs described above.

Staircases in campanile tower.—The interior of the campanile tower will be eleven feet (11 feet) square, and will be occupied, at the level of the museum floor, with a staircase having steps four feet (4 feet) in width, and a well three feet square in the centre. This staircase will lead from the ground floor of the museum to its gallery, and have steps, risers, balusters, newels, coves, brackets, &c., of a similar character to the principal stairs above specified. Above the level of the gallery floor a small stairway two feet six inches in width will be carried in flights, per direction of architect, to the upper story of the tower. The stairway will be partitioned off from the tower by joists, and in the partition doors will be framed and set to communicate with the two upper stories of the tower.

Staircases of octagonal tower.—A winding staircase with steps three feet in width, having a clustered column in the centre, will lead in this tower from the floor of the library to the gallery. The steps will be supported against the wall and the central column by iron stringers, and the hand-rail will be of black walnut. The sides of the tower will be wainscoated up to the under side of the hand-rail, and the central column will be formed of clusters of circular columns of wood. The wainscoat and columns will be painted four coats, and column sanded to represent marble. A hand-rail of black walnut, supported on handsome iron elbows, will be carried around the column. The ceiling of the octagonal tower over this staircase will be groined. A staircase, similar in all respects, and similarly furnished, will lead from the floor to the gallery of the museum. Above this line a smaller staircase will be carried to the summit of the tower. All the treads and risers in these stairways will be of the best yellow pine.

On each side of the rear entrance to the museum a flight of steps three feet wide will lead from the ground floor to the gallery, with balusters, rails, arches, trefoils, newels, coves, and brackets, similar to those of the principal front stairs.

The *stairs to the chemical lecture-room* and its gallery will be placed in the porch on the eastern end of the chemical lecture-room wing. They will consist of two flights: one in the porch, leading level of the porch floor to that of the chemical lecture-room floor, and one in a double flight, landing from the latter level to the gallery. The latter will have steps, coves, newels, balusters, arches, &c., similar in character to those of the two principal staircases, but of smaller horizontal dimensions. Beneath the latter stairs a flight of steps will lead from the level of the chemical lecture room floor to the floor of the basement beneath it. These will have risers and treads of yellow pine, and plain octagonal newels five inches (5 inches) in diameter. The balusters will be octagonal, two inches (2 inches) in diameter, with 8 by 4 inch rails, all of black walnut.

The *stairs in tower of west wing* will be square, filling the whole of the tower, and will be carried first to a level with the floor of the first story, and then to the top of the side aisle arches, with handsome octagonal balusters two inches (2 inches) in diameter, with semicircular arches between those of the same finish, &c., as the two principal staircases, with a square newel handsomely carved, and a 3 by 4 inch moulded hand-rail, all of black walnut. The sides of the tower will be wainscoated to the height of the hand-rail.

The *private stairs to Regents' room*, lecturers' room, and muniment room, will be in the small octagonal tower attached to the central rear tower. They will be carried from the level of the surface of the ground, to the third story of the tower, or muniment room, a height of about seventy feet, (70 feet.) They will wind around a column from 8 to 12 inches in diameter, and will have treads and risers of yellow pine, and a handsome moulded hand-rail, 3 by 4 inches, of black walnut, secured to the walls by iron elbows. The walls will be wainscoated, on end, with black walnut, as specified in former instances, to the height of hand-rail.

Laboratory stairs.—Private stairs, with steps three feet in width, having octagonal balusters two inches (2 inches) in diameter, and 3 by 4 inch moulded rail, of black walnut, will be carried from the ground floor of laboratory, at the end of the chemical lecture-room, to the second floor. A flight of stairs, also three feet (3 feet) in width, will be carried from the first story of the east connecting range to the second story of the same, a height of about thirteen feet. They will be partitioned off with 3 by 4 inch joists, and will have a 3 by 4 inch hand-rail fastened to the wall, both with iron elbows. Under these stairs a flight of similar width, and similarly finished, will be carried from the first floor to the cellar.

Stairs in library and museum.—Twelve small flights of circular stairs will be carried, at the places shown in the plans, from the ground floor and to the galleries of the library and museum. They will be supported on iron, and there will be a trap-door above each of them in the gallery floor, hung on best hinges, which will serve for the purpose of communicating with the galleries.

Elevators.—In each of the smaller towers at the corners of the main building, elevators, having each three (3) shelves, set three (3) feet apart, and framed strongly together, will be furnished. They will be provided with sheaves, cords, and will have cast iron counterpoises running in boxes on the four sides of the tower. The elevators will be worked by a crank, and will be used for raising books and other heavy weights from the bottom to the top of the building.

Doors and their furniture.—All the doors of every part of the building will have semicircular heads, and handsome trimmings and casings, of the same style as the building.

The central front and rear doors will be made of four thicknesses, of 1½ inch white pine plank, laid together diagonally. The outside plank will be of the best clear white pine, and the two inner layers of the best merchantable white pine, all perfectly seasoned. The plank will be narrow, and all of the even width of six inches, (6 inches.) The outer layers will be set diagonally, and all beaded and cross-beaded.

All the plank will be planed, tongued, and grooved, and will be strongly screwed or rivetted together, with white lead in the joints, and painted on all sides.

The hinges, and key plates, and knob plates, will be of heavy wrought iron scroll work, bronzed in the best manner; and the doors will be grained white oak, and will be varnished four coats.

Furniture of apparatus rooms.—The room in the east connecting range behind the east lecture-room, and the room on the same floor in the campanile tower, will be shelved all around, with closets, having panelled doors below, and sash doors above, glazed with good single-thickness American glass.

Furniture of library.—See plans and sections for the arrangement of the cases. The cases will have sash doors, and will be shelved per direction of architect. The doors will be glazed with good single-thickness American glass, in diamonds, or squares set diamond-wise, or will be filled with wire gauze. All the pillars of the cases will be handsomely turned, the doors and sashes of the best workmanship. All the mouldings in the arches will be well worked, and all the capitals and bases neatly turned, and ornamented with stucco ornaments, or well carved.

On the ground floor of the library, at every alcove formed by the pillars and cases, a sliding door, handsomely panelled and moulded, 2½ inches thick, filled with ground glass and sash in the panels, will be made to slide between the longitudinal bookcases, so as to shut off the alcove completely from the central aisle. These doors will be fourteen (14) in number, with handsome trimmings, and will each be furnished with an astragal lock, astragal sheaves and sheaveway, of the best description.

The spaces between the bookcases of the galleries and the ceilings of the aisles will be furred up for plastering.

Four tables, each fifteen feet (15 feet) long and five (5 feet) broad, will be made of black walnut, to be set along the centre aisle of the library. These tables will have handsome carved legs, and be covered with green broadcloth.

A small desk of black walnut will be furnished for each of the alcoves.

The librarian's room, adjoining the library, will have handsome bookcases finished in a style similar to those of the library, with glass doors, &c. All the furniture of the apparatus rooms and library, except where otherwise specified, will be of the best clear, thoroughly seasoned white pine, painted three coats with the best oil paint, grained, if so directed, to resemble oak, and varnished four coats.

Museum furniture.—The museum furniture will be arranged per plans and directions of the architect. All the cases will be of the designs shown on the plans, and will be made of the best thoroughly seasoned clear white pine, handsomely carved, turned, and moulded, with caps and bases similar to those of library, and neat mouldings on the arches. The sashes will be filled with the best French cylinder glass. The spaces between the tops of the gallery cases and the ceilings of the side aisles of the galleries will also be furred up for plastering. The cases will vary in width from four to five feet, (4 to 5 feet.) There will be two rows of cases running longitudinally, in the larger spaces between the columns, the whole length of the room below the galleries, and one case on each side of each of the alcoves, both of the ground floor and galleries. At both ends of the room, cases three feet (3 feet) wide will be carried up to the under side of the end galleries, as per plan.

All the above cases will be ornamented, carved, and finished per plan and directions of architect, painted three coats best white lead in oil, grained and varnished three coats.

The transverse aisle of museum will have cases of similar make and finish carried around the sides and front, except at the stair entrances. These cases will be eighteen inches (18 inches) in depth.

The two rooms in the front tower will be covered all around with cases nine feet (9 feet) high, of similar design, make, and finish, as will also the room in the companile tower.

The room over the rear stairs will have cases nine feet (9 feet) high, of similar design, make, and finish with the above.

The room over the Secretary's room, in the rear central tower, will be fitted with plain cases, shelved, and with doors glazed with good single thickness American glass all around.

All the remaining outside doors will be made in a similar manner, and of similar material to the above, of three thicknesses of one and a half inch plank.

All the inside doors of the basement will have neat and plain casings, with semicircular heads of white pine, painted and grained, white oak or any other wood that may be directed, and varnished four coats. The doors will be made of black walnut or white pine one a half inch plank, put together diagonally in two thicknesses, grained to imitate such wood as may be directed, and varnished three coats.

All the doors of the towers above the roof line will have handsome jambs and arches of white pine, grained and varnished as above.

The doors will be of two thicknesses, of one and a half inch black walnut, or butternut, or white pine, painted, grained, and varnished as above.

The principal doors of the library, museum, galleries of art, Regents' room, and lecture rooms, will have jambs and arches of the section of a double rebate, with an engaged column or octagonal mould each. The columns will have plinths, bases, and caps, well trimmed and handsomely carved.

The doors will be made of three thicknesses of one and a quarter inch plank, butternut, or black walnut, or white pine, grained in the best manner, and varnished four coats, with bronze scroll hinges, key, and knob plates, &c.

All the smaller doors of the above rooms, and of the remainder of the building, will be made of three thicknesses of three and a quarter inch plank, of the same description of materials and workmanship as the above, and with similar hinges, &c. The jambs and arches to be of similar description and workmanship to those of the principal doors.

All the knobs of all the above doors to be of bronze. The locks to be of the best manufacture, and largest size, suitable to the dimensions of the doors. All the outside doors and principal room doors to have strong bolts.

The sliding doors in the library alcoves to be furnished with sheaves, sheave-ways, astragals, and astragal locks, of the best description.

And in general all the doors for the whole building to be finished as above described, in the best and most workmanlike manner, and in all respects in accordance with the directions and plans of the architect.

Roofing, &c.—All the roofs, except those of the central front towers, campanile towers of the main building and west wing, and smaller octagonal and square towers of the central building, will be tinned with best single-cross tin, soldered together in the best manner, painted two coats, and warranted tight for five years. All the gutters of every part of the building, and the roof of the larger central front tower, will be of the best double-cross tin, and painted two coats. All the leaders, which will be put in in sufficient numbers to carry off the water to the cisterns in the roofs, and to the ground, will be of best double-cross tin, varying from four to six inches in diameter, and made square or octagonal. If so directed, they will be painted three coats, and sanded in the second coat, the third coat being coursed to resemble stone; and they will be put in of such sizes and in such number and situations as the architect shall direct.

All the remaining roofs (i. e. of the towers, &c.,) above excepted, will be made of the best Welsh slate of large size, and laid in the best manner, according to the directions of the architect.

Cisterns.—In each of the roofs of the two connecting ranges a cistern of 10 feet square, and four feet six inches deep, which will receive the water of the main building, will be made of best three-inch narrow yellow pine plank, framed up with best 6 by 6 inch joist, like a mill race, and lined with best sheet lead, weighing five pounds to the square foot. These will be fed by a leader from the roofs of the main building, and will have an overflow or waste weir communicating with another leader, which will carry off the surplus water to the ground.

In the spaces between the central front and central rear towers and the main building, two cisterns, 6 by 12 feet, and four feet six inches deep, of similar materials and workmanship to the above, will be placed. These will be fed by the water from the towers of the front and rear.

The roofs where all of the above cisterns are placed will be strengthened to bear their weight, by additional rafters, tie-beams, king posts, and strutts.

Water closets.—There will be two water closets, one on each side of the rear staircase, between the Regents' room and museum, on the second floor, which will be furnished with cisterns, ball cocks, traps, cranks, basins, cocks, &c., of the best description, with brass furniture, and will be finished complete in every respect. They will be fed by one and a half inch extra strong lead pipe, from the cisterns above described. The waste-pipe will be five inches in diameter, of best sheet lead, five pounds to the square foot, which will be carried to a sess-pool on the outside of the tower.

There will also be one water closet in the thickness of the walls of the large front central tower, one in the campanile tower, or near it, one in the basement of the chemical wing, and one in the west connecting range. All of the above to be completely finished in the best manner, with all fixtures necessary to render them complete, fed from the cisterns in the roofs, and having waste pipes of five inches diameter, as above, communicating with sess-pools on the outside of the building.

Bases of best clear white pine, painted three coats, grained in the best manner to imitate such wood as may be directed, or of black walnut or butternut, varnished in all cases four coats, will be carried around the rooms, halls, galleries, &c., of heights varying from four to fifteen inches, and they will be all handsomely moulded, and worked in the best manner, according to the directions of the architect.

Mantel.—A large mantelpiece of very handsome design, as may be directed by architect, will be carved from best black walnut, for the Secretary's room. The whole mantel, with its columns, frieze, and shelf, and the ornaments on it, shall be filled with carved Norman mouldings, deeply sunk, and of best description.

Finish of Regents' room and bay window connected with it.—All the walls of the above will be wainscoated with black walnut or butternut, as may be directed by architect, handsomely panelled, and carved all around with pateras, quatrefoils, and capped with a heavily-carved mould corbel-course, surmounted by a carved cable-mould.

In the side bays of the triple arch, between the room and the bay window, seats of black walnut, or butternut, handsomely carved, will be formed.

All the jambs and arches of the triple-window arch will be moulded and carved per plans and directions of architect.

Eighteen heavily-carved arm-chairs, and one heavily-carved table, in the Norman style, will be carved for the Regents' room, from best black walnut, varnished four coats, and polished. The whole to be carved according to the designs and directions of the architect.

Skylights.—There will be six skylights, five feet square, in the roof to the chemical laboratory; two skylights, five feet square, in the central front stair hall; two of same dimensions to rear stair hall; and twelve skylights, five feet square, to the west wing; all filled with good double thickness American glass, in 2-inch sash. And under these, in all the ceilings of the above rooms, will be interim skylights, filled with best single thickness American glass in handsome fancy sash.

Painting.—All the wood work, of every description, including the shelves of the cases, and in general all the wood work not otherwise specified, to be painted three coats of best white lead and boiled oil.

All the doors and their jambs to be varnished four coats.

All the wood of every description to be perfectly seasoned, and to be free from sap, shakes, black or rotten knots, and all imperfections that might endanger its strength or durability.

All the workmanship, of every kind, to be performed in the best and most perfect manner.

The whole of the above carpenter work, of every description, and all the work connected with it, to be performed according to the plans and directions of the architect.

As it is intended that the above specifications and the plans will cover the whole and perfect completion of the building, and all of its appurtenances, no claim for extra work will be allowed unless caused by actual alterations of the plans. And the parties to the contract will be bound to submit to the decision of the architect of the building, in the sum of ten thousand dollars.

JAMES RENWICK, Jr.,
Architect and Civil Engineer.

Mr. Hough offered the following resolution, which was adopted:

Resolved, That in locating the building for the Smithsonian Institution, the centre of the principal building, exclusive of projections, be placed upon the centre of the lot or site of said institution from north to south, and upon the centre of Tenth street.

Mr. Hough, in offering the above resolution, stated, that as he was compelled, on Monday next, to leave the city, he desired to say, that if this resolution should be reconsidered, so as to place the building centrally between 7th and 12th streets, he would make no objection.

And, on motion, the committee adjourned.

SIXTEENTH MEETING—March 24, 1847.

Present, Messrs. Seaton and Owen.

The chairman submitted from Mr. Renwick, architect of the institution, the following

Report to the Building Committee of the Smithsonian Institution.

Gentlemen: In compliance with your resolution of Friday, the 19th ultimo, by which, in company with Dr. Owen, I was directed to examine and report upon the quarries of freestone on the farm of Mr. Peter, at Seneca creek and Bull run, and those on the adjacent lands, with a view of ascertaining their capability of affording a sufficient quantity of building-material of good quality, and of color suitable for the purposes of the institution, I beg leave to state that we proceeded on Saturday morning to the localities of the quarries of freestone occupying the whole eastern bank of the Potomac, from the mouth of the Seneca creek to a point distant about one mile north of it, where our examination terminated. We also found the stone extending up all the valleys of the smaller streams, as far as we examined them.

The quality of the stone varies from that which is highly argillaceous, and easily decomposed, to that which is silicious, and well calculated to stand the weather and the attacks of frost.

It also varies in color and texture; some of the strata being highly laminated, and others what is technically termed liver-rock, showing but little signs of stratification; and the color varies from a cold blue to a warm lilac gray.

The quarries which appear to have been worked to the greatest extent, are those called the College quarries, from their belonging to the College at Georgetown. The color of the stone in these is generally a blue gray, (see specimen 21, of Dr. Owen's report,) and is rather cold and unpleasant in its aspect; though several of the strata or layers in the middle of the quarry were of a pleasant and warm gray. See specimen No. 23. These latter, however, are difficult of access, having several strata of inferior stone over them, and cannot therefore be obtained without great and unnecessary expense, and should only be resorted to in the event that no other stone of equal color and quality can be found in a more favorable position.

The College quarries lie to the northwest of Bull run and Seneca creek. The dip of the strata is at an inclination of about 20° to the southwest.

To the northwest of these quarries, and on the same face, are quarries belonging to Mr. Peter, where we found the buff-colored stone; (specimen No. 24.) It is much to be regretted that this stone is neither sufficiently durable, from its being argillaceous, nor found in sufficient quantities for the purposes of the institution, as, in my opinion, it surpasses in color any stone I have as yet seen in this country; resembling in hue that used in Edinburgh, and the Caen and Bath stones, which were so much used and so highly esteemed by the architects of the middle ages.

To the north of this quarry is one belonging to Mr. Lee. The color of the stone in this is a warm gray, and the texture is fine and highly silicious, and the quality is excellent. It is a liver-rock, and is found in several strata of considerable thickness, which would afford an abundant supply. Some of the layers, however, contain copper, which might possibly render it liable to stain by long exposure, unless carefully selected. See specimen No. 25.

From this quarry, the most northern one we examined, we proceeded in a southeasterly direction, recrossing the College quarry to the Bull run, belonging to Mr. Peter. The quarry on this run has been opened at a point up the stream, distant about 300 yards east of the Potomac.

The stone is of excellent quality, of even color, being of a warm gray, a lilac tint resembling that known as ashes of roses, and can, from all indications, be found in sufficient quantities to supply all the face work for the institution.

There appear to be three layers of this color, which are, respectively, 20, 24, and 30 inches in thickness.

The stone is highly silicious, rings when struck with the hammer, and where it has been exposed in the bed of the Bull run to the action of the water and frost apparently for ages, and in the culvert under the canal for several years, shows little or no signs of decay.

We traced strata of this color from the present quarries to the mouth of the Bull run, and found it between an overlying layer of a shaly or slaty argillaceous quality, (which is easily decomposed, and must therefore be very carefully avoided,) and a substratum of the dark red-colored stone, (see No. 18 of Dr. Owen's report.) We also found stone of the same color and quality in an old quarry, distant about 600 feet south from the mouth of the Bull run; thus rendering a sufficient supply almost certain.

The strata lie well for quarrying, having but a slight covering and sloping towards the run, thus enabling it to be quarried without binding, which will render the expense small; and the color is equal to that of any stone we examined, except the buff. In company with Mr. Peter, we next visited a house built of coursed and hammered rubble masonry of stone of this color, in which it had a pleasing and airy effect upon the eye. Mr. Peter's stable is also built of stone of this color, and produces an excellect effect. From the above examinations, we were therefore of opinion that Lee's quarries, and those on the Bull run, combine, more than any of the others we have visited, the requisites most necessary for structure, durability, and beauty.

We would also recommend, if the quarry on the Bull run be chosen, that none darker than specimen No. 19 in Dr. Owen's report be allowed to be used in the building, and that great care be taken to prevent any of the argillaceous stone being used; and if Lee's quarry should be selected, that all rock showing indications of copper be prohibited from being used. I subjoin herewith a rough topographical map of the region, in which the distances and localities are put down from memory, as the limited time of our visit prevented any accurate measurements.

Respectfully submitted.

JAMES RENWICK, Jr., *Architect.*

On motion of Mr. Owen, it was

Resolved, That the architect cause to be procured and dressed a block of freestone, of the warm gray color, from Lee's quarry; and also, that he cause to be dressed, in ashlar finish, a portion of the block of freestone from Bull run quarry, now lying before the west wing of the City Hall.

On motion of Mr. Seaton, it was

Resolved, That the chairman address a letter to the president of the Chesapeake and Ohio canal, asking a reduction of the rates of toll on said canal, in favor of the contractor.

Mr Mills, superintendent, submitted to the committee several specimens of freestone, of excellent quality and good color, from the neighborhood of Aquia creek, Virginia.

On motion of Mr. Owen, it was

Resolved, That Dr. Owen visit and report upon the Aquia creek quarries of freestone.

And, on motion, the committee adjourned.

SEVENTEENTH MEETING—March 25, 1847.

Present, Messrs. Owen and Seaton.

The chairman laid before the committee the copy of a letter, which, in accordance with the instructions, he had addressed to the president of the Chesapeake and Ohio Canal Company, as follows:

Washington, *March* 25, 1847.

Sir: I am instructed by the building committee of the Smithsonian Institution to inquire of you, whether, in the event ot the selection of a building material by them from quarries in the neighborhood of Seneca creek, your company would consent to reduce the rate of toll, so far as regards the buildings of the Smithsonian Institution.

The amount required by us may, in a measure, depend upon your answer, as it is not yet determined upon what we will back the walls with. If Seneca stone be taken for the entire walls, I suppose that 10,000 perches of 25 feet may be required.

The Maryland railroad companies had agreed, in event of our selecting marble, to reduce their rates of freight, in our favor, from 4 cents to 2½ cents per ton per mile.

I am, sir, your obedient servant,
ROBERT DALE OWEN,
Chairman of the Building Committee.

To the PRESIDENT
of the Chesapeake and Ohio Canal Company.

On motion of Mr. Owen, it was

Resolved, That the architect be, and he is hereby instructed, during the course of the present year, to commence and carry on to completion the whole of the east wing and the east connecting range, so far as is consistent with the safety of the structure; and also, to commence the foundations of the west wing and the west connecting range, and take such preparatory steps towards the work of the said wing and range as may allow the contractors to prosecute the work with proper economy.

On motion of Mr. Seaton, it was

Resolved, That the architect be authorized to cause to be prepared two perspective views of the building—one of the north front, from the northwest, and one of the south front, from the southeast—provided the cost of completing the two said views in the best style of art shall not exceed two hundred dollars; and that the same be colored to correspond with the color of the stone that may be adopted for the facing of the building.

On motion of Mr. Seaton, it was

Resolved, That Mr. Owen endeavor to procure from the several railroad companies between this city and New York, a free passage for the architect of the institution, pending the erection of the building.

And, on motion, the committee adjourned.

EIGHTEENTH MEETING—MARCH 26, 1847.

Present, Messrs. Owen and Seaton.

The chairman submitted the following letter from Mr. Peter, owner of Bull run quarry, and other quarries in the vicinity of Seneca creek :

MONTE VIDEO, *(near Darnestown, Montgomery County, Maryland,) March* 22, 1847.

DEAR SIR : Yours of the 18th instant was received on Saturday last, in which you state that the building committee have decided to use as the material in the erection of the Smithsonian Institution the stone from some one of my quarries, and that they accept the terms as communicated in my letter of the 9th of December to Mr. Seaton, to wit:

Twenty-five cents a perch for all stone intended for face or cut work, and twelve and a half cents per perch for all calculated for backing or rubble work.

The whole number of quarries will be subject to your preference, and I will be pleased if you will make the selection at as early a day as convenient, as there are several persons applying for permission to obtain stone for other purposes.

Yours, very respectfully,
JOHN P. C. PETER.

HON. ROBT. DALE OWEN,
Chairman Building Committee.

On motion of Mr. Seaton, it was

Resolved, That the final decision on the subject embraced in Mr. Peter's letter be delayed until the return of Dr. Owen from Aquia creek, and until his report on the quarries there is received.

On motion of Mr. Seaton, it was

Resolved, That among the trees to be planted within the grounds of the institution there be included the following:

Elm, beech, oak, osage, orange, pecan, sugar maple, silver-leafed maple, weeping-willow, silver-leafed willow, magnolia grandiflora, pride of China, common laurel, tulip tree, dogwood, holly, hawthorn, horsechesnut, Spanish chesnut, walnut, hickory, mountain ash, lime tree, evergreens, (including the several varieties of pines,) aspen, and sycamore.

And, on motion, the committee adjourned.

NINETEENTH MEETING—March 30, 1847.

Present, Messrs. Seaton and Owen.

The chairman submitted from Dr. Owen the following

Report on the Aquia creek and other Stafford county freestones.

To the Building Committee of the Smithsonian Institution:

Gentlemen: On the 26th of March, agreeably to a resolution passed by your committee, I proceeded down the Potomac to examine the quarries of freestone of Stafford county, Virginia.

On arriving at the mouth of Aquia creek, which is 50 miles from Washington, I learned that the quarries which have been chiefly wrought for the public buildings lie about seven miles up that stream.

On my way I stopped at Major Brook's, five miles on this side of Fredricksburg, to obtain some information about the route. Learning from that gentleman that there were several good quarries of freestone in his immediate vicinity, on Accokeek creek, and near the line of the railroad, I determined to visit them.

I found them situated on both sides of Accokeek creek, close to Major Brook's mill-dam. The upper beds here are about six to eight feet above the level of the creek, and are of a coarse texture, approaching to the nature of a conglomerate. Beneath, about four to five feet above the level of the creek, the rock is finer-grained, with some yellow and gray streaks, (see No. 26.) The rock on this part of Accokeek is below the level of the water when the flood-gates of the mill-race are closed. It was here that the rock of which the mill-dam is constructed was quarried. So far, it has stood the test of exposure in this situation well. The abutments of the railroad viaduct over Accokeek creek are constructed of rock from these quarries; and though the selection does not seem to have been very carefully made, it still remains a substantial work.

The quarries on Aquia creek most convenient to navigation, and those which furnish a rock lightest colored, finest grained, and most uniform, are situated on what is called the Island, being a neck of land seven miles by the course of the stream from its mouth. This island is elevated 15 to 20 feet above a flat swampy plain, which surrounds it on every side, and which, in the early settlement of the country, was an inland bay, navigable for small craft.

At present the waters are contracted into the narrow channel of Aquia creek, about 15 feet wide.

One of the quarries on this island is known by the name of Stewart's quarry, but now owned by Mr. Symington, of Baltimore. To the north and south of it are two others, belonging to the United States.

The columns of the east portico of the Capitol, each of a single piece weighing 18 tons, were obtained at these United States quarries.

The principal ledge hitherto worked here has a covering of only two or three feet of earth, and lies nearly horizontal, in a vast bed from six to eight or 10 feet in thickness, without the slightest apparent seam. For this reason, though the bed is so near the surface, it has been quarried at great expense, at least by the method hitherto employed, which is to groove it behind and on one side two feet wide, (or sufficient to receive a man,) in a vertical direction, even to its base, and then "loft" it off in a horizontal direction by the introduction of wedges at the bottom of the bed in the direction of the stratification.

This Island freestone is of light color, almost white when dry; and is equal, if not superior, in texture and color, to any of the sandstones in this neighborhood. That on Symington's tract (see specimen No. 27) is rather of a finer grain than in either of the United States quarries; (see specimen 28.)

Part of the rock employed on the inside of the Post Office was procured on this island.

Numerous other quarries are found in this vicinity, many of them well opened and wrought to a considerable extent. None are, however, immediately on the bank of Aquia creek. Some lie to the east of the swamp, in the ridge which lies between Aquia creek and the Potomac river, and distant from the latter stream from three to seven miles. These were not visited, as there were no means of crossing the swamp. Others have been opened in many places along the banks of Rocky run.

The stream empties into Austin's run, which bounds the island and swamp on the southwest. That nearest to Aquia creek is distant from half a mile to three quarters of a mile, and is situated on the south side of Rocky run, close to the road which leads from the island to Captain Towson's. This quarry affords a tolerable freestone, (see specimen No. 29,) but it has spots and streaks in it, and is of rather a coarser texture and not so uniform in color as the Island quarry.

About one mile further on the same road, and distant about a mile and a half from Aquia creek, on the north side of Rocky run, is Towson's Beech quarry, which has been wrought to a considerable extent, and has, as most of the quarries here, a fine face on it, all having been worked on the old-fashioned plan of "grooving" and "lofting," as heretofore described. The rock at this locality is of a very fair quality; little inferior to Symington's Island quarry, (see specimen No. 30,) and well situated as regards drainage and covering for quarrying. Occasional clay and ferruginous spots are visible; but a large supply could probably be obtained here, by proper selection, free from any very unsightly flaws or blemishes.

Half a mile further on, or two miles from Aquia creek, on the south side of Rocky run, is Robinson's quarry, the property of Mr. Galehorn.

It will be observed, by specimen numbered 31, that the texture of the rock at this place is rather finer, and the color more of a buff, than at the previously described quarry.

Two and a half miles from Aquia creek, and distant about half a mile to a quarter of a mile from Captain Towson's house, is another quarry of freestone belonging to that gentleman. The beds here are free to work, but much more interlaminated or leafy in structure, than any of the quarries examined, and certainly less durable; (see specimen No. 32.) The face of this specimen on which the number stands, gives a good idea of the tint which this rock acquires by time and exposure.

On jackson's branch of Rocky run, from a mile to a mile and a half south from the island, is a bold quarry, owned by Peggy Norman. The rock here is no doubt durable, but exceedingly indurated, and would be nearly as expensive to cut as granite; (see specimen No. 33.)

Besides the quarries here enumerated, various others have been opened on both sides of Rocky run, of similar quality and appearance to those already described. In fact, every hill for many miles in this neighborhood is composed of solid beds of freestone, varying in texture from a conglomerate and even pudding stone, to a fine grained rock similar to number 25, and varying in shade from a yellowish brown and a buff color, to a nearly pure white. It is probable enough, that as new quarries are opened a better material may be found than any yet disclosed.

In none of the quarries visited in Stafford county did I observe red and pink freestones like those of Seneca creek. Neither did I see there any of those schistose beds, with green cupreous incrustations, such as occur in the sandstone formation of the upper Potomac, in the cupferschiefer of Germany, the copper States of England, and the Permian system of Russia. On the geological charts of this region, these freestones are designated as of the same age as the red sandstones of the Connecticut valley and New Jersey. They differ from these materially in lithological character, and apparently in associated minerals, so far as I have had opportunity of judging; nevertheless, they may be cotemporaneous; this can be ascertained only by a careful search after organic remains, which time did not permit.

On my return to the watering station on Accokeek, I stopped at Major Brook's for the purpose of seeing a quarryman who has had long experience not only in the quarries of Aquia and Accokeek creeks, but also in the marble and granite quarries of the eastern States.

He informed me that at seven miles from the mouth of Aquia creek, close to the railroad, at the high bridge on Potomac run, there are solid ledges of freestone in an escarpment of 90 feet; and according to his statement, there is at that locality a bed very similar in texture and color to that previously described as owned by Symington. Unfortunately, it lies deep seated, and would require a stripping of about 15 feet to get at it; but he says that the strata rise, as you proceed up the Potomac run, to the west, and that there is reason to believe that the ledge in question can be found near the surface about a quarter of a mile from the railroad. If it remains of uniform texture for that distance, a material not inferior in quality to the best rock on the island might be quarried there more convenient to transportation, and in a much more healthy situation, than on the island, surrounded, as that locality is on all sides, by low marshy plains.

On questioning this man with regard to the comparative expense of quarrying freestone there and on Seneca creek, he confidently asserted that by a judicious mode of drilling and very careful blasting, rock might be quarried even cheaper here than on Seneca creek, although at the latter locality the beds, being thinner and of a less "livery" nature, can be easily split by the "plug and feather," because on Aquia and Accokeek creeks, and Potomac run, there is much less stripping, and because the beds lie more level and undisturbed. This, however, is certain—that by the old method employed by Captain Towson, dimension stone from Aquia creek has hither cost $6 per ton of 15 cubic feet, or 40 cents per foot; and even these prices have not afforded an extravagant profit to the owners of quarries; whilst there can be little doubt that dimension-stone can be furnished from Seneca creek for half that amount.

If good material could be obtained near the line of the railroad, either in the neighborhood of Potomac run, or, still nearer, the mouth of Aquia creek, transportation would certainly not cost as much as from the quarries on the Island and Rocky run. There are several obstructions between the quarry and the mouth of the creek, which render it often necessary to lighten the vessels by means of scows, over these bars, and none of the vessels of suitable draught for the navigation of Aquia creek carry over 80 to 100 tons; whereas, if laden at the terminus of the railroad, they could easily carry double that amount, requiring but the same number of hands.

From all the workable beds of freestone of Stafford county, so far as they had been opened, a very considerable portion must be rejected on account of flaws and stains; but, as a general rule, there is less than in the Seneca quarries.

The general appearance of the lighter (buff-colored) beds of the freestones of Stafford county, Virginia, laid up in range work, may be seen by inspecting the east gate-way of the President's House, the entrances to the Capitol grounds, and the inside work of the Post Office.

Under the magnifier, minute dark specks may be observed of the color of blacksmiths' scales, which are probably small grains of a mixture of the protoxide and peroxide of iron. If this be their composition, they will, doubtless, in peroxidating, acquire a yellowish or reddish color. Still, in many specimens these are so minute, that the effect would be only to mellow the color, without materially affecting the durability of the mass. That a proportion of this stone is free from material blemish and is a durable material, is confirmed by an inspection of the ledges and blocks in sight, and in the structures composed of the best rock, long exposed to atmospheric vicissitudes; by the glistening particles disseminated on the face of fresh fractures; by the action of the rock on the edge of the dressing tool, indicative of a tolerably pure grit-stone, free from argillaceous admixture; by the heavy solid bed in which it lies in the quarry, generally free from interlamination; and, finally, by the hardening of the mass by exposure.

I incline to believe that the sample of Aquia creek freestone furnished to Dr. Page for examination was not equal to the average quality of the better quarries in Stafford county.

Mr. Dixon, the contractor, is of opinion that the general run of the freestones will be somewhat but not very much more expensive to work and carve than the Seneca sandstones.

As the result of my examination of these quarries, in connexion with those of the upper Potomac, I state my belief, that the Stafford county region can furnish an unlimited supply of freestone, of which, by dint of careful selection, a portion may be obtained both sound and durable; not, indeed, free from yellowish or gray streaks, nor, certainly, of as fine a grain as the lilac-gray of Seneca creek, but not disfigured by conspicuous holes, pebbles, or stains, such as are almost universal in the blocks to be seen in the public buildings in Washington, where this material has been used.

I think it owes its present bad character as much to indiscriminate selection as to inherent defects. Its color, occasionally approaching that of marble, is in its favor, though time and the weather change it for the worse. (See specimen No. 32, on the face where marked.)

It would make a lighter and more airy-looking building than the lilac-gray. But I am convinced that it could not be delivered in Washington nearly as cheap as the latter; especially if, as the owners of the Aquia creek quarries thought, slave labor only could be employed there. And I feel assured that, even with reasonable care in selection, the chance of procuring the white sandstones unblemished by disfiguring spots or stains, is uncertain; far more so than in the case of the lilac-gray.

Upon the whole, this latter material, as found in the middle beds of Bull run quarry, seems to me the safest and best of the Potomac freestones; somewhat darker, indeed, than one would desire, if the choice were free, but uniform in color, improving in its tint by the bleaching effect of time, not liable to be disfigured by accumulation of smoke and dust, and of unquestionable solidity and durability.

I annex to this report a rough chart of the freestone quarries of Aquia creek, drawn by the eye, without actual measurement. It will give a general idea of their relative situation.

All of which is respectfully submitted.

DAVID DALE OWEN.

WASHINGTON, *March* 30, 1847.

Specimens referred to in the foregoing report.

No. 26. Major Brook's quarry, lower beds.
No. 27. Symington's island quarry.
No. 28. United States island quarry.
No. 29. Beard's quarry on Rocky run.
No. 30. Towson's Beech quarry.
No. 31. Robinson's quarry, owned by Galehorn.
No. 32. Towson's quarry, near his house.
No. 33. Peggy Norman's quarry, on Jackson's branch.

On motion of Mr. Seaton, it was

Resolved, That the material for the external walls of the building be freestone, of the lilac-gray color, similar to specimen No. 19 of Dr. Owen's report on the freestones of Seneca creek, and that none be used darker than that specimen; to be taken either from Bull run quarry, or from any other contiguous quarry furnishing freestone of the same color and of equal quality.

Resolved, That a copy of this resolution be furnished to the contractors, and that specimen No. 19, above referred to, be carefully preserved for reference.

Resolved, That if two wells be opened by the contractors, of such size and description and in such spots as may be designated by the architect, the committee will allow for them, when the building is completed, whatever they may then be worth.

Resolved, That a copy of the foregoing resolution be furnished to the contractors.

And, on motion, the committee adjourned.

TWENTIETH MEETING—March 31, 1847.

Present, Messrs. Seaton and Owen.

The chairman laid before the committee the following letter, in reply to that addressed by him to the president of the Chesapeake and Ohio Canal Company:

Frederick, *March* 29, 1847.

Sir: Your letter of the 25th instant, making inquiry whether the Chesapeake and Ohio Canal Company would consent to reduce the rates of toll on stone, "so far as regards the buildings of the Smithsonian Institution," has been received, and I will present it to the consideration of the board of president and directors at their next meeting, on the 7th of April, and communicate to you their answer.

I would here, however, merely remark, that the toll charged on stone at present on the canal is 1 cent per perch per mile for twenty miles, and 1½ cent per perch per mile for any greater distance it may be carried; and that with their rates and the usual charge made by boatmen for transporting it, the cost by the canal would, I think, be less than by the railroad, even at the reduced charge mentioned in your letter.

Very respectfully, your obedient servant,

J. M. COALE,
President of the Chesapeake and Ohio Canal Company.

To the Hon. Robert Dale Owen.

On motion of Mr. Owen, it was

Resolved, That Mr. Seaton be a sub-committee to see the Commissioner of Public Buildings, and endeavor to procure from him permission for the contractors to use the remains of the old fence standing on such portions of the mall between 7th and 12th streets as is not included in the site of the institution.

Mr. Owen stated to the committee that it was his intention to proceed to-morrow to New York, for the purpose of making preliminary arrangements regarding the preparation and publication of the work on "Public Architecture" intrusted to him, as per resolution passed by this committee on the 6th instant, and that he would take that opportunity of communicating with the several presidents of the railroad companies between Washington and New York, and endeavor to procure a free ticket on those roads for the architect of the institution.

And, on motion, the committee adjourned.

TWENTY-FIRST MEETING—April 6, 1847.

Present, Messrs. Seaton and Owen.

Mr. Owen having returned from New York, made, in regard to his proceedings there, the following report:

After conversing with the principal publishers in New York, in regard to the terms on which they would be willing to publish the volume of "Public Architecture," of which the preparation was intrusted to me by resolution of the committee of the 6th March, I finally, with the aid of Mr. Drayton, (to whom I am greatly indebted for the valuable information and assistance he gave me,) made with Wiley & Putnam, one of the most respectable firms of the city, the following contract:

Agreement between Wiley & Putnam, publishers of the city of New York, of the first part, and the Building Committee of the Smithsonian Institution, by the chairman of said committee, of the second part, dated this 3d day of April, 1847.

Whereas the said building committee are charged with the preparation and publication of a volume on architecture, to be entitled "Hints on Public Architecture," and to contain numerous and valuable illustrations, including two perspective views of the buildings of the said Smithsonian Institution, and also to have an appendix containing the results of a research about to be made under the auspices of the said institution, to test the properties of the most important building materials throughout the United States:

Now the parties of the first part hereby contract and agree to have the said work set up in small pica, of such face as the said committee shall select, thin-leaded for the body of the work, and either small pica solid or long primer for the appendix, at the option of said committee. And the said parties of the first part agree, that the letter-press paper shall measure 19½ inches by 26, and that it shall be of such quality as to cost not less than 16 cents per pound, and that each ream shall weigh not less than 40 pounds. And the parties of the first part further agree, that the printing shall be done in the best manner, with ink of the first quality, and the wood-cuts carefully overlaid, (so as to give their full effect,) by a suitable person accustomed to such work; and also, that the copperplate paper shall be of quality as good as the letter-press paper, of the same size, and of the proper thickness and qualities required for fine illustrations, and that the copperplate printing shall be done in the best manner. And the said parties of the first part further agree, that the page of printed matter shall be about five inches and three-quarters by nine inches, and that the binding shall be in cloth, gilt lettered, and of such material as shall cost thirty cents per volume. And the said parties of the first part agree to do the whole of the above work, including materials, at their own cost and expense.

And the party of the second part agree that they will furnish, at their own cost and expense, the entire illustrations for said work, including two perspective views of the Smithsonian Institution, and that the said illustrations shall be of such number and quality as shall cost one thousand dollars, and said illustrations shall be executed in the best style of art; and that as many of the said illustrations as are to be incorporated with the text shall be wood-cuts, and that the rest shall be either copperplate or steel engravings; and that they will deliver the same to the parties of the first part free of all charge, and completely ready for printing. And the said parties of the second part further agree that they will furnish to the parties of the first part the manuscript of the said work free of all charge, and that the same shall not exceed, including the appendix, one hundred and fifty printed pages.

And for and in consideration of the furnishing, by the said parties of the second part, of the illustrations and manuscript as aforesaid, the parties of the first part agree to deliver to the parties of the second part five hundred copies of the said work, complete and bound as aforesaid, so soon as the same can be prepared; and they further agree that, so soon as the sale of the said work shall have returned to them the cost of composition, printing, paper, and binding, then, out of the first profits of the same they the said party of the first part will further deliver to the parties of the second part additional copies of the said work until the said additional copies amount to five hundred, so that the whole number of copies furnished shall be one thousand in all, free of all charge to the parties of the second part.

And it is mutually agreed that after the delivery of the said thousand copies the said illustrations shall be and remain the property of the parties of the first part; but the said parties of the first part agree that they will at any time, on being thereto required by the parties of the second part, deliver to the said parties of the second part any number of impressions from any of the said plates at the cost of paper and printing.

And the said parties of the first part agree that so soon as the illustrations and manuscript are delivered to them, they will cause the said work to be published without unnecessary delay.

In testimony whereof, the parties of the first part have hereunto set their hands and seals, and the chairman of the said building committee has hereunto subscribed his name, on the behalf of the said building committee, the day and year above written.

ROBERT DALE OWEN, *Chairman,*
on behalf of Building Committee of Smithsonian Institution.

RATHBUN ALLEN,
Witness as to signature of Robert Dale Owen.

WILEY & PUTNAM.

WILLIAM B. GRAVES,
Witness as to signature of Wiley & Putnam.

The size selected is what is called long quarto, and its somewhat oblong shape is suitable for plates. The price stipulated for the paper, $6 40 a ream, insures its good quality. The size of the paper and of type, and the size of the printed page, were selected in part with reference to the probable form of our Transactions, which form, I think, might advantageously be copied, without variation, from this volume.

I found that no publisher would agree to deliver to us one thousand copies at once, nor until they had secured a return of the money actually expended by them. They were all of opinion that so large a number as one thousand copies distributed at the outset, would so injure the sale as to make it a losing business.

As it was necessary to obtain considerable assistance from Mr. Renwick in preparing drawings for wood-cut illustrations, revising text, &c., I made a verbal agreement with him that, in return for such assistance as I might have occasion to require of him, he should receive twenty-five copies of the work out of the first 500, and 25 copies more out of the second five hundred received by us.

By these arrangements the entire sum of one thousand dollars, appropriated for the publication of this work, can be expended on illustrations, giving much increased value to it.

With a view still to increase that value, I took some steps which I hope will secure us additional illustrations executed in the best style.

Finding that the marble front of Stewart's new dry-goods store in Broadway was probably the finest specimen of the modern Italian style of architecture in the United States, I procured an introduction to Mr. Stewart's partner, (Mr. S. being now in Europe,) and proposed to him that if he would expend $100 to furnish us an elevation of his store, on steel, we would afterwards, if he desired it, furnish him as many copies as he might require at the cost of paper and printing. He said he would write immediately to Mr. Stewart; that he did not doubt that he would agree to it. He is to communicate the result to Mr. Renwick, who will superintend the preparation of the plate.

I was also introduced by Mr. Renwick to the principal vestrymen of Grace church; and he expressed to me his hope that he could obtain from the vestry a vote for a similar plate of that church, a fine specimen of the latter or Flamboyant gothic.

I also commissioned Mr. Renwick, who is acquainted with some of the vestry at Trinity church, to see them, and try to obtain a plate of that edifice.

These plates, if obtained, would furnish excellent illustrations of the most suitable character, and give much additional character to the publication.

I called upon A. B. Durand, president of the Academy of Design, now a portrait and historical painter, and formerly the best engineer in the United States, and ascertained his opinion, that the best engravers for portraits in the United States are Cassilear, 22 Bleeker street, New York, and Cheeney, of Philadelphia.

He considers Roberts, of New York, the best wood-cutter. He thinks that to Cassilear or Cheeney the portrait of Smithson, for our Transactions, should be intrusted.

I called on Robert Schuyler, president of the Brunswick and New York railroad, in regard to a season ticket, or free ticket, for our architect, Mr. Renwick. There is no chance of obtaining a free ticket. A season ticket at a reduced rate may possibly be obtained. Mr. Schuyler promised to write to me on the subject.

I did not until further consultation decide whether the perspective drawings of our institution, &c., should be in quarto or double quarto form. The folding of the latter seems to me so objectionable, that I incline to the former, though it be somewhat small for so extensive a building.

Respectfully submitted, by

ROBERT DALE OWEN.

On motion of Mr. Seaton, it was

Resolved, That the prospective views of the institution, alluded to in the above report, be executed in quarto form.

The chairman submitted from the superintendent the following communication:

April 6, 1847.

Dear Sir: On consulting with the Commissioner of Public Buildings in relation to the use, by the committee, of the old fence around the mall, between 7th and 12th streets, to enclose the lot of the institution, between the same points, he agrees to allow so much of the same as is necessary for this purpose.

I have made an estimate to determine what the expense would be of removing, repairing, and enclosing this open fence with a five feet height of palings, and found it would amount to four hundred dollars.

The circuit of these grounds is 3,680 feet.

Mr. Dixon reports that the expense of conducting the water from the Market-house pipe to the building, will cost six hundred and fifty dollars.

Respectfully submitted.

ROBERT MILLS,
Assistant Architect and Sup't Smithsonian Institution.

To the Hon. Robert Dale Owen,
Chairman of the Building Committee
of the Smithsonian Institution.

On motion of Mr. Seaton, it was

Resolved, That, for the purpose of conveying to the building a supply of water, as well for the builders as for the permanent uses of the institution, the consent of the Commissioner of the Public Buildings be requested for drawing a supply from the water plug at the Centre Market-house, to be conveyed thence, by a leaden pipe, to the institution.

Resolved, That an arrangement be made with some responsible contractor for laying said pipes, provided the cost thereof does not exceed $650.

Resolved, That the resolution of the 30th ultimo, in regard to the digging two wells, be, and the same is hereby, rescinded.

Resolved, That Mr. Downer, or some other responsible person, be employed to build a substantial paling fence around the institution ground, provided the same cost not more than $400, and that the fence be as high as the present rails will permit with safety.

And, on motion, the committee adjourned.

TWENTY-SECOND MEETING—April 9, 1847.

Present, Messrs. Seaton and Owen.

Mr. Owen stated to the committee that he had spoken with one of the Regents, Mr. A. D. Bache, on the subject of procuring a steel plate of the Girard College, from the managers of the said institution, on the same terms proposed to Mr. Stewart, as mentioned in his (Mr. O.'s) report of April 6; and that Mr. Bache promised to write on the subject to the principal manager of the Girard College, and to communicate the result to the committee.

Mr. Owen also stated that he had written on the same subject to Mr. Richard Rush, Regent, from Philadelphia, requesting him to use his influence to procure for us the said plate.

Mr. Seaton stated that he was about to write a similar letter to Mr. Ogden Hoffman, one of the vestrymen of Calvary church, New

York, with the view of procuring a plate of that church on similar terms, as a specimen of the lancet gothic style of architecture; and that he would communicate the result to the committee.

Mr. Owen submitted from the contractor, Mr. Dixon, the following:

WASHINGTON, *April* 8, 1847.

GENTLEMEN: After minute examination of all the quarries on Mr. Peter's land, it is extremely doubtful to me whether or not a sufficient quantity of the stone on which the contract is based can be procured in any of his quarries, as that stratum seems to be nearly exhausted. There seems to be abundance of stone in the bed under which No. 19 has been worked off; but it appears to be of a much deeper color, and a great deal harder in its texture, and could not be cut at anything like the price of No. 19 stone.

There are, I am told, a great many quarries of sandstone on Seneca creek, on Mr. Vincent's* land; but knowing that your board was about to adjourn, I hastened back to make this statement, and had not time to examine them.

Respectfully, &c.,

JAMES DIXON.

To the BUILDING COMMITTEE
of the Smithsonian Institution.

P. S.—If I am right in my opinion that the Bull run quarries will not produce the stone that you have selected, it might be well enough for the board, before their final adjournment, to pass a resolution to this effect: that some discretionary power be left with the architect to change or modify the material, otherwise the building would necessarily come to a stand; but this I leave to your better comprehension.

J. D.

Laid on the table.

Mr. Owen submitted from Mr. Joel Downer, carpenter, the following offer to put up a temporary fence around the grounds of the institution:

WASHINGTON, *April* 8, 1848.

GENTLEMEN: I will contract to enclose the ground with a paling fence from 5 feet 8 inches to 6 feet, average; the palings to be sawed, three inches wide, of the best quality that comes to our market; the palings to be nailed on the rails with three nailings, and 6 nails in each paling, with a bottom board averaging 12 inches in width. It is understood that the posts and rails now standing on 12th street and B street are to be righted up and made use of; and the posts and rails for the north and east line are to be taken up from the public enclosure, and used for that purpose. I will put up the fence in a good and substantial manner for four hundred dollars.

Respectfully,

JOEL DOWNER.

To the BUILDING COMMITTEE
of the Smithsonian Institution.

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* Supposed Charles Vinson: see p. 43.—R. D. O.

[Note.—On inquiry, I learn that the above bid includes all materials, though not expressly so stated.

ROBERT DALE OWEN.]

Laid on the table.

Ordered, That, for the present, the services of Wm. McPeak, messenger, be dispensed with.

On motion of Mr. Owen,

Resolved, That the architect be authorized to cause to be erected on the ground a secure temporary building, as an office for the said architect, provided the same shall not cost over two hundred dollars.

The chairman stated to the committee the request of Mr. Mills, the superintendent, that he be allowed the use of the lower rooms in the City Hall which were granted by the corporation to the building committee, until the same are required by the committee.

Ordered, That Mr. Mills be allowed the use of said rooms accordingly.

On motion of Mr. Owen, it was

Resolved, That the city surveyor be requested to make out a plat of the grounds of the Smithsonian Institution, laying down the levels at each intersection of one hundred feet.

And, on motion, the committee adjourned.

TWENTY-THIRD MEETING—April 10, 1847.

Present, Messrs. Seaton and Owen.

Mr. Owen submitted for consideration the following resolutions, relative to the work on "Public Architecture," of which the preparation had been intrusted to him:

Resolved, That the work on "Public Architecture," to be published by the committee, contain a comparative review of the advantages, economy, and facility of adaptation to modern purposes, of various styles of public architecture, particularly the Grecian, modern Italian, Gothic of different ages, and Norman; giving the actual cost, compared to extent of accommodations, of some of the principal public edifices in the United States, in the various styles, including some of the public buildings in Washington, and others erected by the general government.

Resolved, That, so far as the funds permit, the said work contain illustrations, in the best style of art, representing such among the public buildings of the United States as exhibit the purest specimens of architecture, in various styles, including two perspective views of the Smithsonian Institution, on steel; one perspective view of the gothic plan submitted for competition by Mr. James Renwick, jr., architect of the institution; one perspective view of the Norman plan submitted by Mr. Haviland, provided he (Mr. H.) will, at his own cost, reduce the drawing to the required size; one perspective view either of the plan submitted by Mr. Arnot, or that submitted by Mr. Notman, provided the architect will, at his own cost, reduce the drawing to the required size; one geometrical elevation of the Italian plan submitted by Mr. Daniel, of Cincinnati, provided he will reduce the same; also ground plans and geometrical elevations of the Smithsonian Institution, and one or two interiors of the same.

Resolved, That application be made, in the proper quarters, for plates of the following public edifices, to wit:

1. Girard College.
2. Stewart's dry-goods store, Broadway, New York.
3. Grace Church, New York.
4. Trinity Church, New York.
5. Calvary Church, New York.

And if the respective authorities are willing to furnish such plates, without cost, then that the same be used in the said work, accompanied by a brief description of each edifice. And in that case, that the chairman of the building committee be empowered to agree with those furnishing the said plates, that the Smithsonian Institution will, at any time, furnish to them as many impressions from the plates thus furnished by them as they may desire, at the cost of paper and printing.

Resolved, That, if the funds permit, the said work contain a geometrical or perspective view of the east front of the Capitol of the United States, and a geometrical elevation of the south front of the General Post Office.

In submitting the above resolutions, Mr. Owen stated to the committee that it was his intention, in order as far as possible to avoid expense to the institution, to prepare as much of the work as practicable at home, and for that purpose he would take with him a few works on architecture; but that it would be necessary for him to spend some weeks in New York, and probably in Washington, to consult authorities, to which he had not access at home, to receive the necessary aid from Mr. Renwick, and to take steps for the preparation of the illustrations.

The above resolutions, after deliberation, were adopted.

And, on motion, the committee adjourned.

TWENTY-FOURTH MEETING—April 11, 1847.

Present, Messrs. Seaton and Owen.

The chairman laid before the committee the following letter:

Darnestown, Montgomery County, Md.,
April 7, 1847.

Dear Sir: Mr. Dixon was here yesterday, and made a superficial examination of the quarries, but made no selection, as you informed me would be his purpose, in your letter to me dated the 31st of March. He admitted, as I think must be apparent to any one, that stone of similar character with the specimen which he says the committee have adopted may be found in abundance for all your purposes. Indeed, upon examination we find it embraced in a much larger field than I had before observed, and I have no doubt it could be obtained to any extent that may be required.

The quarries, from the characteristic position of the stone and the partial manner in which they have been worked, present a different appearance from such as we commonly see; but as an evidence of the facility with which they may be worked, there is a party now engaged in getting stone from them for the use of Mr. Berry, who has contracted to deliver the same in Washington for twenty cents a cubic foot; and I have no doubt Mr. Dixon could get his stone delivered much more readily for the same, as the quantity he would require would justify the contractor in working the quarry to a much greater advantage.

I would only add that the kind of stone that I understand you have selected may be obtained here in any quantity you may require, and the difference in the expense of using it is a full justification for its selection.

I have been induced to make this communication to guard you against any unfavorable impression Mr. Dixon may be induced to make, in which I feel justified by expressions he used when here.

Yours, very respectfully,

JOHN P. C. PETER.

Hon. Robert Dale Owen,
Chairman of the Building Committee Smithsonian Institution.

Laid on the table.

Mr. Owen, in connexion with the subject of the above letter, stated to the committee that he had written to the architect, Mr. Renwick, informing him that the committee adhere to their resolution regarding the color and quality of building-material for the external walls, and look to him to see it strictly carried out.

The chairman laid before the committee, from the ex-messenger, McPeak, the following letter:

Washington, *April* 11, 1847.

Sir: Believing that I can render good service to the committee in my capacity as messenger, both in attending in the office and overlooking the grounds of the institution, and removing nuisances, therefore I would respectfully offer my services to the committee at one dollar per day.

Respectfully,

WM. McPEAK.

Hon. Robert Dale Owen,
Chairman of the Building Committee Smithsonian Institution.

Laid on the table.

And, on motion, the committee adjourned.

TWENTY-FIFTH MEETING—April 12, 1847.

Present, Messrs. Totten, Seaton, and Owen.

Mr. Totten, having returned from Mexico, took his seat on the committee.

The chairman laid before the committee several specimens of building-stone, similar in color and quality to specimen No. 19 of Dr. Owen's report on the sandstones of the Potomac, from the quarries of Charles Vinson, Seneca Mills; (see his letter to the building committee, page 42 of this journal.) The chairman stated that Dr. Owen had examined the specimens, and considered them equal to specimen No. 19.

The journal of the building committee, contract with James Dixon & Co., and specifications and plan of foundations of the building, prepared by the architect, were submitted to Mr. Totten, and examined by him.

Mr. Totten stated to the committee that the duration of his stay in Washington was uncertain, and that he might be called upon to visit some of the fortifications of the United States in the course of two or three weeks.

On motion of Mr. Owen, it was

Resolved, That Mr. Renwick be requested to return to Washington within a fortnight, so as to confer on the subject of the details of erection of the building with Mr. Totten.

And, on motion, the committee adjourned.

TWENTY-SIXTH MEETING—April 14, 1847.

Present, Messrs. Seaton and Owen.

Mr. Seaton submitted to the committee the following letter from Captain Buckingham, whom he stated to be known to himself as having executed with faithfulness and ability, both for the city corporation and the government, work of the same character as that for which he here proposes to contract:

Washington, *April* 14, 1847.

Sir: I have made a calculation of the expense of conducting the water from the Market square to the buildings of the Smithsonian Institution, on the mall.

I will agree to furnish all the necessary material, and put down the pipes to said building, for six hundred and fifty dollars, and take the necessary risk. I calculate that there are about 2,000 feet in all.

Respectfully, your obedient servant,

C. BUCKINGHAM.

Wm. W. Seaton, Esq.

Captain Buckingham appeared; and, on being questioned, informed the committee that his proposal was for a leaden pipe of inch-bore, and of the quality called "strong pipe;" that he proposed to lay the pipe down not less than two feet under ground, and to cross the canal with a two-inch iron pipe, laid down below the bed of the canal.

On motion of Mr. Owen, it was

Resolved, That a contract with Captain Buckingham be prepared, in accordance with the above offer; stipulating that the work be completed in one month from this date.

The communication of William McPeak, laid on the table on the 11th inst., being called up, it was

Ordered, That William McPeak be re-engaged as messenger, to commence from the 7th inst., at six dollars per week.

Mr. French, masonic Grand Master of the District of Columbia, appeared before the committee, and expressed, on behalf of the Grand Lodge of the District of Columbia, their willingness to assist in laying the corner-stone of the Smithsonian Institution with masonic ceremonies.

On motion of Mr. Seaton, it was

Resolved, That the Grand Lodge of the District of Columbia be invited, in connexion with any other masonic lodges who may unite with them, to aid in laying the corner-stone of the Smithsonian Institution; and that Saturday, the first day of May, be recommended as a suitable day for that purpose.

Resolved, That Mr. Owen be a committee to wait upon the President of the United States and invite him, as head of the corporation, to lay the said foundation-stone; and also to wait upon the Vice President of the United States and invite his presence, as Chancellor of the institution, to deliver a brief address on said occasion.

Resolved, That Mr. Seaton be authorized to pay any incidental expenses that may be necessarily incurred on said occasion.

Resolved, That the contractor be requested to prepare a suitable corner-stone.

Mr. Owen expressed to the committee his intention—as Colonel Totten had returned, and a quorum could thus be obtained without him—of returning, within a few days, home to Indiana; and his regret that, in consequence, he would not be able to be present at the proposed ceremony.

And, on motion, the committee adjourned.

TWENTY-SEVENTH MEETING—April 15, 1847.

Present, Messrs. Seaton and Owen.

The chairman presented a contract with Captain Buckingham to convey water to the building site, which, in accordance with the resolution of yesterday, he had prepared and had submitted to Captain Buckingham and to Colonel Totten; both of whom had signified their approbation of it, and Colonel Totten had signed it.

It was approved and signed. It is as follows:

This agreement, made the fifteenth day of April, 1847, between Caleb Buckingham, of the city of Washington, of the first part, and the Building Committee of the Smithsonian Institution, of the second part, witnesseth:

That for and in consideration of the sum of six hundred and fifty dollars, to be by the party of the second part paid to the party of the first part, as hereinafter provided, the said party of the first part agrees to furnish all the necessary materials, of the best quality, and all the necessary work, to be done in the best and most substantial manner, to conduct the water from the fire-plug at the engine-house, in Market square, in the said city, to the building about to be erected for the Smithsonian Institution, on the mall, between 9th and 12th streets. And the party of the first part agrees, that he will lay down a leaden pipe of inch-bore, and of the quality called "strong pipe," at least two feet below the ground; and he will furnish the same with a stop-cock of the best quality, at the end where the said fire plug is tapped; and also a hydrant cock of the best quality at the end of the pipe next to the building. And the said party of the first part further agrees that he will convey the water across the canal in an iron pipe of two-inch bore, and of the best quality; which iron pipe shall be sunk below the bed of the canal. And the said party of the first part agrees, that he will conduct the said leaden pipe so as to terminate at any point, not more than fifty feet from the foundations of the building, that may be pointed out by the architect or superintendent of the institution.

And the said party of the first part further agrees, that he will complete the laying of the said pipe, with its appurtenances, so that water can be used from the same one month from the date of this agreement.

And the party of the second part agree, that so soon as the said work shall have been completed to the entire satisfaction of the architect or superintendent of the said institution, and the said architect or superintendent shall have certified that fact to the parties of the second part, the said parties of the second part will pay to the said party of the first part the above sum of six hundred and fifty dollars. In testimony whereof, the said party of the first part has hereunto set his hand and seal, and the said building committee, on behalf of the said institution, have hereunto subscribed their names, the day and year aforewritten.

C. BUCKINGHAM, [L. S.]

ROBERT DALE OWEN,
J. G. TOTTEN,
W. W. SEATON,
Building Committee.

The chairman presented from Mr. Randolph Coyle, city surveyor, a chart of the grounds belonging to the institution, crossed with lines of equal levels marked at each crossing of one hundred feet.

Ordered, That the above chart be preserved as a record of levels, by inserting it in the journal of the committee.

The chairman stated to the committee that he had waited upon the President, in accordance with the resolution of yesterday, and expressed to him the desire of the committee that he would consent to lay the corner-stone of the Smithsonian building; and that he, the President, has expressed his willingness to do so.

The chairman further informed the committee that the President stated to him that he (the President) would order the attendance of the marine band on the occasion.

The chairman stated to the committee that he had waited upon the Vice President, in acordance with a resolution passed yesterday, and that he (the Vice President) promised, if he could so arrange his business, to attend on the occasion of laying the foundation-stone of the Smithsonian building, and to deliver a brief address on that occasion.

And, on motion, the committee adjourned.

TWENTY-EIGHTH MEETING—April 16, 1847.

Present, Messrs. Seaton and Owen.

The letter of Mr. Joel Downer, carpenter, dated April 8th, and submitted to the committee at their twenty-second meeting, coming up for consideration, Mr. Owen submitted a contract which he had prepared in accordance with the offer made by Mr. Downer for the erection of a temporary fence around the grounds of the Smithsonian Institution, and which he stated to the committee had been submitted to the superintendent and Mr. Downer, and had been approved by them.

The said contract was approved, and signed by the committee and by Mr. Downer, and is as follows:

This agreement, made the 16th of April, 1847, between Joel Downer, of the city of Washington, of the first part, and the Building Committee of the Smithsonian Institution of the second part, witnesseth:

That for and in consideration of the sum of four hundred dollars, to be by the party of the second part paid to the party of the first part, as hereinafter provided, the party of the first part agrees to fence in the lot or plat of land belonging to the said Smithsonian Institution, and situated on that portion of the mall which lies between 9th and 12th streets, containing nineteen acres, or thereabout; the said fence to be made in the most substantial and workmanlike manner, and to be completed in one month from the date of this agreement. And the said party of the first part agrees that the said fence shall be of sawed paling, of the best quality that comes to the Washington market, each paling to be about three inches wide, and to be nailed on the rails with three nailings, and six nails to each paling, and the palings not more than two and a half inches apart.

And the said party of the first part further agrees, that the said fence shall have a bottom board averaging twelve inches in width, firmly nailed on, and the ground levelled up to the bottom of the same.

And the said party of the first part further agrees that the said fence shall be from five feet eight inches to six feet high, and that the posts shall be well and securely set in the ground, and that the fence shall stand, as nearly as convenient, on the boundary of the said lot, except on the north side; on which north side the fence shall be placed fifteen feet north of the boundary-line of the land of the said institution. And the said party of the first part agrees that he will furnish all the materials whatever for the said fence: *Provided, however*, That the posts and rails now standing on 12th street and on B street south may be used by the said party of the first part. *And provided further*, That in case the Commissioner of Public Buildings consent thereto, the posts and rails now standing on such portion of the mall as lies between 7th and 12th streets, and is not the property of the said institution, may also be used by the said party of the first part as part of the material of said fence.

And the party of the first part further agrees that he will leave openings for gates in said fence, at such points as may be pointed out by the contractor or superintendent; but no gates are included in this contract.

If there be not sufficient rails on the said lot between 7th and 12th streets, then the contractor, Mr. Dixon, will furnish the same to the party of the first part, as per annexed agreement.

And the party of the second part agree, so soon as the said fence shall be completed to the full and entire satisfaction of the architect or superintendent of the Smithsonian Institution, and that fact shall have been certified to the parties of the second part by the said architect or superintendent, that they, the said parties of the second part, will pay to the party of the first part, in full for said fence and material, the sum of four hundred dollars.

In testimony whereof, the said party of the first part has hereunto set his hand and seal, and the said parties of the second part, members of the said building committee, have hereunto, on behalf of the said Smithsonian Institution, subscribed their names the day and year aforewritten.

JOEL DOWNER, [L. S.]

ROBERT DALE OWEN,
JOS. G. TOTTEN,
W. W. SEATON,
Building Committee.

Agreement with Mr. Dixon, referred to in the foregoing contract.

If the old rails now standing on the mall between 7th and 12th streets be not sufficient to complete the fence around the grounds of the Smithsonian Institution, I hereby agree to furnish to Mr. Joel Downer, at my own cost, a sufficient number of good rails to make up the deficiency. I also agree to have made, at my expense, not less than two gates, at convenient points in said fence, to be hung on good and substantial gate-posts.

JAMES DIXON.

Mr. John P. C. Peter appeared before the committee, and reiterated in presence of the contractor, Mr. Dixon, his (Mr. Peter's) complete assurance, as formerly expressed in his letter, (page 121,) that there was in his Bull run quarry a sufficiency of rock to erect the buildings of the Smithsonian Institution, of a tint not darker than No. 19 of the specimens appended to Dr. Owen's report on the Potomac sandstones; a portion being of lighter tint. He was informed that the committee adhered to their decision not to use for the external walls any material darker than No. 19, but they did not object to some portions of the building being of a lighter shade. He was further informed that the architect, Mr. Renwick, and perhaps one of the committee, would shortly visit Bull run quarry, for the sake of ascertaining, by actual excavation and otherwise, whether the supply from the stratum in question was sufficient.

And, on motion, the committee adjourned.

TWENTY-NINTH MEETING—April 17, 1847.

Present, Messrs. Seaton and Owen.

On motion of Mr. Seaton, it was

Resolved, That the Corporation of the city of Washington, the Independent Order of Odd-Fellows, the volunteer companies, and the citizens generally, be invited to join in the ceremony of laying the foundation stone of the Smithsonian Institution.

The chairman stated to the committee that he had consulted Mr. Drayton as to the actual size which the plates of the proposed volume on architecture might be made, so as to leave adequate margin; and that it was found that they might be *eleven inches by seven inches*, (or, if necessary, eleven inches by seven inches and a half.)

Mr. Owen stated to the committee that he had written to Mr. Renwick, instructing him to cause the perspective views of the Smithsonian Institution to be of that size.

The chairman submitted an inscription, prepared by the superintendent, for a plate to be placed under the corner-stone of the Smithsonian building.

It was adopted, and is as follows:

Inscription for the foundation-stone of the Smithsonian Institution.

On the first day of May, 1847, was laid, in the city of Washington, this
foundation-stone of a building to be appropriated for the
Smithsonian Institution;

FOUNDED BY BEQUEST OF JAMES SMITHSON, OF GREAT BRITAIN.

James K. Polk, *President of the United States.*

Corporation.

President of the United States.
Vice President of the United States.
Secretary of State.
Secretary of the Treasury.
Secretary of War.
Secretary of the Navy.
Postmaster General.
Attorney General.
Chief Justice.
Commissioner of Patents.
Mayor of the city of Washington.

Officers.

George M. Dallas, *Chancellor.*
W. W. Seaton, Chairman, } *Executive Committee.*
Jos. G. Totten, } *Executive Committee.*
Robert Dale Owen, } *Executive Committee.*
Joseph Henry, *Secretary.*
Charles C. Jewett, *Assistant Secretary.*

Board of Regents.

George M. Dallas, Vice President.
Roger B. Taney, Chief Justice.
W. W. Seaton, Mayor of the City.
Lewis Cass, U. S. Senator.
Sidney Breese, U. S. Senator.
James A. Pearce, U. S. Senator.
Robert Dale Owen, U. S. Representative.
Wm. J. Hough, U. S. Representative.
Henry W. Hilliard, U. S. Representative.
Rufus Choate, Massachusetts.
Richard Rush, Pennsylvania.
Gideon Hawley, New York.
Wm. C. Preston, South Carolina.
A. Dallas Bache, National Institute.
Jos. G. Totten, National Institute.

Building Committee.

Robert Dale Owen, Chairman.
Jos. G. Totten.
W. W. Seaton.

James Renwick, jr., *Architect.*
Robert Mills, *Assistant Architect and Superintendent.*

On motion of Mr. Owen, it was

Resolved, That the superintendent be authorized to contract for the engraving of said plate, at an expense not exceeding fifteen dollars.

And, on motion, the committee adjourned.

THIRTIETH MEETING—April 19, 1847.

Present, Messrs. Seaton and Owen.

The chairman laid before the committee, from Dr. Owen, the following communication relative to details of arrangements in the laboratory:

August 17, 1847.

Gentlemen: Several details connected with the arrangement of the laboratory of the Smithsonian Institution have recently occurred to me, or been suggested by conversation with gentlemen experienced in chemical manipulation. I place them at your disposal, in case you may see fit to adopt all or any of them.

I advise that the sliding doors between the laboratory and lecture-room be of sheet copper, blackened, so that they may serve as black boards for the purpose of illustration.

Pulleys in the ceiling of the laboratory, behind the lecturer's table, will be found very convenient to suspend illustrations, so that they can be raised or lowered. Black boards of blackened sheet copper or iron, in nests or sets to slide one behind the other, will be found extremely useful to the lecturer, thus suspended by pulleys.

The floor of the laboratory may advantageously be covered with thick sheet zinc.

The roof of the laboratory is best covered with slate, as the rain-water caught from a slate roof is purer than from a metal one.

The tops of all the tables in the laboratory, including the narrow tables below the shelving, should be of serpentine, and from one to two inches thick. Serpentine can be procured from Proctorsville, Vermont. Even the tops of the tables to hold the balances are best of this material. It is not acted upon by acids; that is, the Vermont variety.

The flues of the furnace over the hot air chambers should be of half-inch soapstone slabs.

There should be in the basement, gasometers for hydrogen or carburetted hydrogen—very convenient in organic analyses.

The air should be admitted above the ash-pits in the cellar; for if it be not, the ashes blow up with the draught.

The furnace flues should all be smoothly plastered inside, especially those of furnaces to raise high temperature. For such furnaces Dr. Jackson, of Boston, recommends flues tapering from below upwards, the larger flues being a little over 12 inches in the basement, and tapering to nine inches at top; and the area at top being somewhat greater than that of the flue throat next the furnace. He is of opinion that by this form of flue, the *lateral* currents of cool air that usually pass down chimneys are prevented, and thus all the cold air must pass through the furnace. I have tried the plan, and they draw well.

It is unnecessary to line the flues with fire-brick, except at the throat leading from the furnace.

Every table, both in the laboratory and in the working laboratory, should be furnished with a blast pipe, proceeding either from a large bellows in the basement, or a small bellows fixed under the table, or a condensing syringe.

If, in the course of the erection of the Smithsonian laboratory, I can be of any service in furnishing further details, I shall do so with pleasure, if written to on the subject; and to avoid misapprehension, I may add, without any charge to the institution.

I regret that my occupation as geologist of Wisconsin is likely to take me to so great a distance from your city, that I shall have little chance to aid by personal supervision, as otherwise I should have been happy to do.

Respectfully submitted, by

DAVID DALE OWEN.

To the BUILDING COMMITTEE
of the Smithsonian Institution.

On motion, the above communication was referred to the architect of the institution.

Mr. Renwick, the architect, appeared before the committee, and stated that it was probable that plates of Grace church, and of Trinity, could be procured, if he (the architect) were authorized, by resolution of the committee, to make application for the same.

On motion of Mr. Owen, the following preamble and resolution were adopted:

Whereas it has been represented to this committee that some members of the vestry of Trinity church, New York, have liberally expressed their willingness to furnish to the Smithsonian Institution a plate on steel or copper, containing a perspective view of Trinity church, to be printed in the forthcoming volume on Public Architecture, about to be published by this committee: Therefore,

Resolved, That Mr. James Renwick, architect of the Smithsonian Institution, be and he is hereby authorized, on behalf of the said institution, to state to the said vestry that if they decide to furnish said plate, it will be accompanied in the said volume with a description of Trinity church, as exhibiting the best example in the United States of the style of architecture in which it is erected; and that the building committee, if thereto required by the above vestry, will furnish to them, at any time, as many impressions from the said plate as they may desire, at the cost of paper and printing.

And, on motion, the following additional preamble and resolution were adopted:

Whereas it has been represented to this committee that some members of the vestry of Grace church, New York, have liberally expressed their willingness to furnish to the Smithsonian Institution a plate on steel, containing a perspective view of Grace church, to be printed in the forthcoming volume on Public Architecture, about to be published by this committee: Therefore,

Resolved, That Mr. James Renwick, architect of the Smithsonian Institution, be and he is hereby authorized, on behalf of the said institution, to state to the said vestry that if they decide to furnish said plate, it will be accompanied in the said volume with a description of Grace church, as exhibiting the best example in the United States of the style of architecture in which it is erected, and that the building committee, if thereto required by the above vestry, will furnish to them, at any time, as many impressions from said plate as they may desire, at the cost of paper and printing.

And, on motion, the committee adjourned.

THIRTY-FIRST MEETING—April 20, 1847.

[Held at the office of Mr. Totten.]

Present, Messrs. Totten, Seaton, and Owen.

The architect appeared before the committee, and the various specifications, especially those connected with the foundations of the building, having been revised, the following items in regard to the same were agreed to:

That the concrete, as given in the specifications, is unnecessarily rich in mortar, and that about 14 parts of stone or brick fragments to 2 of dry cement, and one of lime paste, and eight of sand, is a suitable composition.

That the concrete under the foundation be laid in two steps, and in six-inch courses.

That a bench mark be set up in some convenient spot in the vicinity of the building, for permanent reference.

That when the foundations are excavated, they be tried with a rammer; and if any impression be produced, that the bottom be thoroughly rammed.

That the architect ascertain from the contractor, and report to the committee, what sum would be saved by substituting two-inch furring and lathing for the brick lining wall; the flues being sunk to a sufficient additional depth in the wall.

That a pattern of the jamb of one window, and of such other portions of the cut-work of the building as may be designated by the architect, be prepared as a sample; and, after being approved, be preserved for reference.

On motion of Mr. Owen, the following preamble and resolution were adopted:

Whereas it has been represented to this committee that one of the partners of the firm of Alexander T. Stewart & Co., of New York, has signified the probability that the said firm might supply an elevation, on steel or copper, of the front of their marble store in Broadway, to insert in the volume on Public Architecture about to be published by this committee: Therefore,

Resolved, That Mr. James Renwick, architect of the Smithsonian Institution, be and he is hereby authorized, on behalf of the said institution, to state to Messrs. Stewart and Company, that if they decide to furnish said plate, it will be accompanied in the said volume with a description of their store, as exhibiting the best example in the United States of street architecture in the modern Italian style; and that the building committee, if thereto required by Messrs. Stewart and Company, will furnish to them, at any time, as many impressions from the said plate as they may desire, at the cost of paper and printing.

The committee then adjourned to the building site belonging to the institution, where they found the excavation for the foundations of the east or chemical wing commenced, examined the character of the ground, as shown in a square trench dug for the purpose of ascertaining its character; and decided, that the foundations as specified in the contract were sufficient.

The committee then returned to the City Hall; and, on motion, adjourned.

THIRTY-SECOND MEETING—April 21, 1847.

Present, Messrs. Seaton and Owen.

The chairman laid before the committee, from the president of the Chesapeake and Ohio Canal Company, the following letter, received to-day:

Frederick, *April* 20, 1847.

Dear Sir: As promised in my former letter, I laid your proposal for the reduction of the toll on stone for the use of the Smithsonian Institution before the board of president and directors of the Chesapeake and Ohio Canal Company, at their meeting on the 10th inst., and now apprize you that, whilst the board entertain the best wishes for the success of the great undertaking you have in charge, they yet feel constrained to decline making the reduction suggested.

As I mentioned in my letter to you, the cost of transportation on the canal, estimating the toll by the perch, as is the practice on our canal, is at present much less than the rival improvement you allude to, and I hope this consideration will suffice to determine you in favor of the Seneca quarries.

With great respect, yours, &c.,

J. M. COALE,
President of the Chesapeake and Ohio Canal Co.

On motion, the letter was referred to the contractors, Messrs. Dixon and Cameron.

The chairman stated to the committee that he should set out to-morrow morning for the west; but if, at any time during the summer, his presence should become necessary on the committee, he would endeavor to return at as short a notice as possible.

And, on motion, the committee adjourned.

THIRTY-THIRD MEETING—May 1, 1847.

Present, Messrs. Seaton and Totten.

On motion, it was

Resolved, That William Beverly Randolph be appointed marshal-in-chief during the ceremonies of the day.

And then, this being the day appointed to lay the corner-stone of the building destined to be occupied as the Smithsonian Institution, the committee adjourned to join in its ceremonies; of which the following description is extracted from the National Intelligencer:

"Early in the morning the banners in front of the City Hall and at other public places gave indication of a holyday and a day of public rejoicing. At nine o'clock the volunteer companies, under the command of

Captain Tucker and Lieutenant Tate, were formed at their respective parade grounds, near the City Hall. At about the same hour the cars arrived from Baltimore, bringing hither a large delegation of the Free Masons of Baltimore and Philadelphia, to unite with their honored brethren in this District in the grand and interesting ceremonies of laying the foundation of an institution whose object is the ' increase and diffusion of knowledge among men.'

"At ten o'clock the members of the various lodges of Free and Accepted Masons of the District united with the delegations from Maryland and Pennsylvania, and took the station assigned them in the order of the procession by the marshal-in-chief. Beverly Randolph, esq., who appeared, as most of the assistant marshals, in appropriate badges. The masonic part of the procession was unusually grand. We never witnessed so numerous a turn out in this city of that ancient and respectable fraternity, who embrace in their body, persons of every condition in life and of all countries. The Philadelphia delegation, headed by Colonel James Page, Grand Master of Pennsylvania; the Baltimore delegation, headed by Charles Gilman, esq., Grand Master of Maryland; and the Washington, Georgetown, and Alexandria delegations, headed by B. B. French, esq., the popular Grand Master of the District of Columbia; all these functionaries, and several other officials whose names we do not know, with the long line of members in full regalia, with their splendid banners and emblems, presented a very interesting and imposing spectacle.

"Not less so the very numerous and respectable body of the Independent Order of Odd Fellows, comprehending many of the lodges of this District. The Odd Fellows, by their number, splendid regalia, banners, emblems, excellent music, and rich costume, added greatly to the imposing appearance of the interesting pageant. Dr. W. B. Magruder, splendidly decorated, acted as grand marshal of the Odd Fellows, whose chief officers are Dr. Joseph Borrows, Grand Master, and Dr. Flodoardo Howard, Deputy Grand Master, who appeared in their proper places, supported by other prominent officers and members of the Order.

"The procession (formed agreeably to the programme of the day) moved from the City Hall to the President's House about 11 o'clock. The marshal-in-chief and his aids were all on horseback, and wore white scarfs and blue rosettes. Three bands of music accompanied the procession, which was more than a mile in length. Of the music we cannot avoid saying, that it was excellent. The marine band is uniformly so. The national brass band, recently formed under Mr. Massoletti, played admirably. Garcia's band, from Alexandria, attracted particular attention by its excellent performances. This band, being uniformed, was taken by several persons for Deem's celebrated Baltimore band; a great compliment, truly.

"The column moved down 4½ street to Pennsylvania avenue, then up the avenue to 7th street, up 7th to E, up E to 11th, up 11th to F, and thence on F to the presidential mansion, where the President, heads of departments, diplomatic corps, &c., were received into the line. The entire column then moved by Pennsylvania avenue and 12th street to the site of the Smithsonian Institution.

"The military was then formed in line on the south side of the site, and the President, heads of departments, diplomatic corps, Regents, mayor and corporation of Washington, &c., passed in front, receiving their salute, and repaired to an elevated platform erected for the occasion near the corner-stone, and beautifully arched and decorated with festoons and wreaths of flowers and evergreens.

" The column then opened to the right and left, and the masonic bodies, preceded by the Grand Master of the District of Columbia, passed up the line to the corner-stone.

" The masonic ceremonies were then performed, for the details of which we are indebted to an official source, as follows:

" Proclamation for silence having been made by the Grand Marshal—

" B. B. French, esq., the Grand Master, accompanied by James Page, esq., the Grand Master of the Grand Lodge of Pennsylvania, and Chas. Gilman, esq., the Grand Master of the Grand Lodge of Maryland, took his stand at the corner-stone, and. having announced the object of the meeting, called upon the Grand Chaplain of the Grand Lodge of Maryland, brother McJilton, to address the Throne of Grace, which he did as follows:

" PRAYER.

" O Lord God of nations! There is none like thee in heaven nor in earth; which keepeth covenant, and showeth mercy unto thy servants that walk before thee with all their hearts. Thou hast kept with thy people that which thou has promised them in all generations; and that which thou hast spoken with thy mouth thou hast fulfilled with thy hand even unto this day. (2 Chron. vi, 14, 15.) As thou didst with thine ancient people Israel, of small beginning, thou hast raised up a mighty nation in this western world. By thy power it has prospered; by thine arm it has been begirt with strength; by thine hand it has been overstrewn with blessings.

" Few in number and feeble in strength our fathers came upon these shores. They hewed themselves a home in the wilderness, and sat down weary and toilworn amid the wilds of the forests. But they abode beneath the shadow of the Almighty. (Ps. xci, 1.) Thou wast to them as rivers of water in a dry place, and as the shadow of a great rock in a weary land. (Isa. xxxii, 2.) Thou gavest them rain in season. The land yielded her increase, and the trees of the field yielded their fruit. The threshing reached unto the vintage, and the vintage to the sowing time. They did eat their bread to the full, and dwelt in the land in safety. When their enemies rose against them, thou wast the shield of their defence. In thy strength they had power to overcome, and their foes fled before them. Thou gavest them independence and peace, and madest them to lie down in safety, with none to make them afraid. Thou didst set up thy tabernacle among them; thou didst break the bands of their yoke, and made them to go upright and free. (Lev. xxvi.)

" Thy second Israel has been greatly blessed at thy hands. Thou hast given her plenty of corn and wine. Thou hast made peace in her borders, and filled her with the finest of the wheat. Thou hast strengthened the bars of her gates, and blessed her children within her. (Ps. cxlvii, 13, 14.) Thou hadst respect unto our fathers. Thou madest them to be fruitful, and didst multiply their prosperity. Thou didst establish thy covenant with them. Under thy fostering care the land became the heritage of freedom, the asylum of the oppressed, the home of the stranger, a blessing to the nations. The gloomy clouds of ignorance and superstition are resting darkly upon other lands; but the sun of enlightenment and religion is beaming brilliantly upon ours. The shackles of civil bondage are binding the nations of the East, and they bow in their captivity to the despot's iron rule; but no fetters of oppression bind the free of this favored land. Civil discord has reared its hydra head, and rent asunder the bond that united other States, but ours is unharmed, and no enemy appears that has power to sever it. The pestilence with fearful step has trodden other shores, and desolation fierce and fell has marked its direful way; but the rude form of the ravager has not reached our favored clime, and the trail of his burning footstep is not found upon our soil. The famine has marred the beauty of a sister land, and the shrill cry of the suffering still rises from the soil that is made desolate by its terrible tread; but our barns are yet full of the harvest's yield. We have enough and to spare. While the oppressed can find a home of happiness in our wide domain of liberty, we have bread for the starving, and our ships are bearing it to the sufferers beyond the seas. Truly the Lord has been good to us. He has remembered us in mercy; he has rewarded us beyond our deservings.

"And now, O Lord God of nations, that hast so highly favored and so greatly prospered the people of this land, hear thou in heaven, thy dwelling place, the cry and the prayer of thy servants when they pray before thee, that thy fatherly care and protection may be continued over us; that thy power may still be our prosperity, thine arm the girdle of our strength, thy hand the security of our blessing.

"Let thy mercy cover our sins; for we must acknowledge that, like lost sheep, we have erred and strayed from thy righteous ways. We have departed from the path of thy holy commandments, and we have done evil in thy sight Give us true repentance for our many and grievous offences. Overrule the rebellion of our hearts, and the disobedience of our lives, by the interposition of thy abounding mercy, and let not our guilt be visited in merited vengeance upon us.

"May we never, either in word or deed, deny the Lord, nor neglect his sacred worship. But may his blessed name, his doctrine and worship, be so inwoven with our institutions of freedom, that the names of American and Christian may ever be one and inseparable. As a nation, as well as individuals, may we spurn the creeds of infidelity, and in the acknowledgment of the Divine authority supplicate the overruling providence of God, remembering always that it is He that maketh us to differ from others, and that crowneth us with mercy and loving kindness.

"Grant us wisdom, and purity, and integrity of purpose, that we may preserve unhurt the inheritance of freedom that our departed sires have bequeathed us. May it be nothing impaired, nothing dimmed, but strengthened and brightened by our having used it and enjoyed its blessings. And may we deliver it to the succeeding generation as spotless as we received it; as beautiful, as rich a treasure, as it came to us, drenched in the blood and crowned with the victorious bays of two fierce ensanguined wars.

"In the day of battle thou hast been our defence, and our enemies have not triumphed over us. In the face of our foes thou hast 'redeemed us from the sword,' (Job, v. 20,) and no weapon formed against us has prospered. So be it ever, when the hand of dishonor shall assail us, or the rod of the oppressor be uplifted to our hurt.

"In peace may we possess our territory. Do thou make the shout and the noise of the battle to cease from our shores, and may friendship, and love, and righteousness prevail. Make us to know that wisdom is better than weapons of war, and a peaceful heritage than much spoil. May the spear of the warrior be speedily exchanged for the plough and the pruning-hook, and the dread thunder of battle for the shout of thanksgiving to God.

"Guide us ever in the choice of our rulers, that the wisdom and virtue of the nation may appear in the characters and deeds of those who may be honored with majesterial distinctions. May the praise which is sounded by thy Church be echoed from the high places of the republic, and re-echoed from the multitudes of the people, until, like the rushing of many waters, the voice shall go forth proclaiming the Lord Omnipotent to be our God. And in the pursuits of our lives, in the expressions of our lips, and in our daily worship, may we prove that we know no other God but him.

"With thy favor we beseech thee to behold and bless thy servant the President of the United States, and all others in authority, and so replenish them with the grace of thy holy spirit, that they may always incline to thy will and walk in thy way. Teach thou our Senators wisdom, that they may establish such laws as are wholesome and good. Direct thou the minds of our judges, that they may decree justice, and that their judgments may be rendered with equity. Imbue the people with a spirit of patriotic devotion, and enlighten them with heavenly wisdom, that they may be zealous of their country's honor, and exercise with prudence the fearful trust of freemen which is committed into their hands. Make us a people fearing thee and honoring thy most holy name; loving each other as brethren, and living for the good of mankind.

"We invoke thy blessing upon this present undertaking of thy servants. Grant that the structure here commenced under the eye, and, we trust, by the direction of thy Providence, may be reared up in thy name, and redound to thy glory. May the building here to be erected as a depository of the curious works of art and nature, and emblems of national distinction, be more than sufficient for this worthy and honorable purpose. May it become a monument of usefulness to us as a nation, and a matter of admiration to the nations of the world. In the deposite of national symbols, may it be a central point of peace and friendship for the kingdoms and governments of the earth. And may the nations which shall be represented in its halls find themselves in union, firmly leagued for the encouragement of national prosperity, the promotion of art and intelligence, and the increase of human happiness. May it be as a central sun of science, about which systems may revolve, and from which light and knowledge may be reflected throughout every clime and kingdom of the globe. And, in the accomplishment of these great and important results, may the blessings of the nations follow the memory of the projector, and America become the almoner of a bounty whose benefits shall not cease to flow until time shall be no more.

"In all our civil and domestic relations may we remember our religious duties, and contribute of our means and services and characters to the increase of thy Church, and the advancement of thy glory; that we may be a people truly serving thee, honoring thy name in our walks and works of righteousness, and in the possession of happiness under thy smiles and favor.

"Let thy priests, O Lord, be clothed with righteousness, and thy saints rejoice in goodness. (2 Chron. vi, 41.) Let thy way be known in all the earth, thy saving health among all nations.

"Grant that the course of this world may be so peaceably ordered by thy governance, that thy Church may joyfully serve thee in all godly quietness; that thy people may walk in the ways of truth and peace, and at last be numbered with thy saints in glory everlasting.

"Hearken, O Lord God, we beseech thee, to the prayers and supplications which we have nŏw presented before thee. And let it be thy good pleasure to grant us our requests, which we offer in the name and through the merits of thy son Jesus, and our Lord, to whom, with thee and the Holy Ghost, be all honor and glory: world without end. Amen.

"There was then deposited in a cavity in the corner-stone a leaden box, containing the following articles, viz:

"The gold and silver coins of the United States; report of the Committee on Organization; Constitution of the United States; the New Testament; Declaration of Independence; Congressional Directory for 1847; bulletins of the National Institute; report of the first National Fair at Washington; report of the United States agent appointed to receive the legacy of James Smithson; medal portrait of James Smithson; reports of the Commissioner of Patents; journal of the proceedings of the Board of Regents, 1846; an engraved plate, with the following inscription:

"On the 1st day of May, 1847, was laid, in the city of Washington, this
"foundation-stone of a building to be appropriated
"for the Smithsonian Institution;

"FOUNDED BY BEQUEST OF JAMES SMITHSON, OF GREAT BRITAIN.

"JAMES K. POLK, *President of the United States.*

"*Corporation.*

"President of the United States.
"Vice President of the United States.
"Secretary of War.
"Secretary of the Treasury.
"Secretary of State.
"Secretary of the Navy.
"Postmaster General.
"Attorney General.
"Chief Justice.
"Commissioner of Patents.
"Mayor of the city of Washington.

"*Board of Regents.*

"George M. Dallas, Vice President.
"Roger B. Taney, Chief Justice.
"W. W. Seaton, Mayor of the City.
"Lewis Cass, United States Senator.
"James A. Pearce, United States Senator.
"Robert Dale Owen, United States Representative.
"William J. Hough, United States Representative.
"Henry W. Hilliard, United States Representative.

“Rufus Choate, Massachusetts.
“Richard Rush, Pennsylvania.
“Gideon Hawley, New York.
“William C. Preston, South Carolina.
“A. Dallas Bache, National Institute.
“Joseph G. Totten, National Institute.

“*Officers.*

“George M. Dallas, *Chancellor.*
“W. W. Seaton,
“Joseph G. Totten, } *Executive Committee.*
“Robert Dale Owen,
“Robert Dale Owen,
“Joseph G. Totten, } *Building Committee.*
“William W. Seaton,
“Joseph Henry, *Secretary.*
“C. C. Jewett, *Assistant Secretary.*
“James Renwick, jr., *Architect.*
“Robert Mills, *Assistant Architect and Superintendent.*
“James Dixon and Gilbert Cameron, *Contractors.*

“The address of the Chancellor of the institution on laying the corner-stone; astronomical observations made at the National Observatory; a copy of the Directory of the city; the city newspapers of the day.

“There was also deposited in the same cavity, by the Free Masons, a leaden casket containing the following articles, viz:

“An elegant copy of the Holy Bible, presented by the Rev. Charles A. Davis, on behalf of the Bible Society of Washington; a stereotype page of Bancroft's History of the United States; Constitution of the Grand Lodge of the District of Columbia; an impression of its seal in metal; a copy of its proceedings for 1846; a silver plate, inscribed with the names of the Grand and subordinate lodges of the District.

“The Grand Master then applied the square, level, and plumb, and pronounced the stone properly squared, duly laid, *true and trusty.*

“He then proceeded to place upon the stone the corn, wine, and oil, preceding this ceremony by an appropriate explanation of their symbolic meaning, concluding his remarks by the following quotation from the venerable Harris: ‘Wherefore, brethren, do you carry corn, wine, and oil in your procession, but to remind you that, in the pilgrimage of human life, you are to impart a portion of your bread to feed the hungry, to send a cup of your wine to cheer the sorrowful, and pour the healing oil of your consolation into the wounds which sickness hath made in the bodies or affliction rent in the hearts of your fellow-travellers.’

“Upon pouring the *corn* upon the stone, the Grand Master said: ‘I do this, expressing a hope that the hearts of those who are charged with carrying into effect the intentions of the generous donor whose legacy has established the Smithsonian Institution, may be strengthened in the performance of all their duties.’ In pouring thereon the *wine*, the Grand Master said: ‘May the Regents of this institution, and all connected therewith, be cheered onward and rejoice in the success of all their measures connected with the erection of this building and with the government of the institution.' In pouring the *oil* upon the stone, he said: 'May harmony, peace, and brotherly love prevail among all connected with the Smithsonian Institution, and may they witness the placing of the capstone of the complete edifice under circumstances as propitious as those which attend the present ceremonies.'

"The Grand Master then informed the assembled multitude that he held in his hand the identical gavel used by the immortal Washington in conducting the masonic ceremonies upon laying the corner-stone of the Capitol of these United States—this happy and glorious Union, which had now so greatly extended, and was still extending, so that no man could foresee its magnitude or its power. He also stated that he had the honor then to wear an apron worn upon the same occasion by the Father of his Country, which was presented to Washington by the Grand Lodge of France, through that great and good patriot and mason, General Lafayette. This apron, he said, had been in possession of Mount Nebo Lodge, of Shepherdstown, Virginia, for many years, and that that lodge had kindly delegated a brother, S. McElroy, esq., to bear the apron to this city, and to present it to the Grand Lodge, with a request that it be worn by the Grand Master on this occasion, which he had done at the meeting of this morning.

"The Grand Master then gave three raps upon the stone with the gavel of Washington, the masonic brethren present gave the grand masonic honors, and the masonic ceremonies were concluded.

"Mr. Dallas, the Chancellor of the Board of Regents, then rose and delivered the following

"ADDRESS.

"*Friends and fellow-citizens:* It has been deemed proper, that, at a ceremony so interesting as the present to the Smithsonian Institution, its chief officer should make to you a few general remarks explanatory of its origin, its purposes, its plans, and its prospects. Let me, therefore, ask your attention while I undertake that duty.

"The Congress of the United States, by an act passed on the 10th of August last, organized '*an establishment,*' through the instrumentality of which to apply faithfully to its directed objects a legacy of five hundred thousand dollars, received by our government under the will of a philosophic and benevolent Englishman. This '*establishment*' is composed of our highest public fuctionaries for the time being: the President, the Vice President, the Chief Justice, and the Heads of the six Executive Departments, with the Commissioner of the Patent Office and the Mayor of Washington; and, as the active council of management, a board is created of fifteen, known in the act by the scholastic name of 'Regents,' one-fifth of them chosen by the Senate, another fifth by the House of Representatives, and of the remainder, two-fifths, by the joint action of both legislative chambers. It is to accommodate this imposing agency, to give it permanent and suitable means with which to effectuate its important and various purposes, and to shelter as well as exhibit its collections and property, that Congress enjoined to be erected, 'of plain and durable material and structure, without unnecessary ornament,' the edifice whose corner-stone you have seen deposited.

"James Smithson, a Londoner born, and claiming to be the son of a distinguished nobleman, gave his life exclusively to intellectual pursuits, and especially to researches in physical and experimental science. Supplied with larger means than his wants required, and steadily practising a strict scheme of personal economy, he amassed considerable fortune. He died at Genoa in 1829, and, by his will, bequeathed his accumulated property to this Union—a country that, notwithstanding his frequent change of abode, he had never visited, whose citizens he had never associated with, but in whose inevitable future he saw the most solid ground on which to cast the anchor of his fame. This legacy, for some time the subject of litigation in the British Court of Chancery, was finally secured, brought over, and received into the treasury of the United States on the 1st of September, 1838. Its exact amount, when deposited, was five hundred and fifteen thousand one hundred and sixty-nine dollars.

"The legacy was accompanied by a declaration of its design; and the execution of that design has been assumed, as well by an acceptance of the money, as by several open and formal avowals by our government. It was to '*found an institution at Washington for the increase and diffusion of knowledge among men;*' to found, not an academy, not a college, not a university, but something less technical and precise, something whose import and circuit should be bolder and more comprehensive; an institution not merely for disseminating, spreading, teaching knowledge, but also, and foremost, for creating, originating, increasing it. Where at? In a city whose name recalls the wisest, purest, and noblest spirit of the freest, newest, and broadest land. And among whom? Not a chosen or designated class—not the followers of a particular sage or sect—not the favorites of fortune, nor the lifted of rank; but among MEN—men of every condition, of every school, of every faith, of every nativity. *Men!* It was with a purpose thus elevated and expansive, thus as well distinct as undiscriminating, that James Smithson committed his wealth to the guardianship of the American republic. Whatever may be the difference of opinion as to the comparative merits of the many modes of practically realizing this purpose, it is quite certain that the good faith and best exertions of our country are solemnly pledged to its fulfilment. We must try it—try it sincerely, indefatigably, trustworthily—try it through all the diversified and promising channels—try it with no narrow exclusiveness of choice or prejudice as to systems, sciences, or arts. The intention of the benefactor was to make his endowment a perennial fountain of wisdom, as well practical as theoretic or imaginative, whose living waters should be unceasingly distributed to advance the intelligence, comfort, and happiness of human beings.

"When, at no distant day, I trust, it shall be seen that within the walls of this building the truths of nature are forced by persevering researches from their hidden recesses, mingled with the stock already hoarded by genius and industry, and thence profusely scattered, by gratuitous lectures or publications, for the benefit of all; when it shall be seen, that here universal science finds food, implements, and a tribune—art her spring to invention, her studio, and her models; and both shall have throngs of disciples from the ranks of our people, emulous for enlightenment or eager to assist—then the condition of our legacy will have been performed, and the wide philanthrophy of Smithson have achieved its aim!

"As a beginning to the plan for effecting a result so interesting, Congress have deemed and declared the erection of a large and commodious edifice indispensable. The Board of Regents were, by the legislative charter, instructed to select, as soon as they were organized, a site, and to cause a structure to be reared, and that structure to make 'of sufficient size, and with suitable rooms or halls for the reception and arrangement, upon a liberal scale,' *first*, of objects of natural history, including a geological and mineralogical cabinet; *second*, of a chemical laboratory; *third*, of a library; *fourth*, of a gallery of art; *fifth*, of the necessary lecture-rooms; and, *sixth*, of the national cabinet of curiosities and relics, now poorly and partially accommodated in the upper story of the Patent Office. It is the first duty of the Regents to obey the unequivocal behests of Congress, to carry them out faithfully on the scale and in the spirit they obviously import; and to let their measures flow, not from their own discretion, but from the provisions of the law which they are empowered to execute. I say this in explanation of the dimensions which the building must necessarily take. It is consecrated to the various and boundless objects that tend to 'increase and diffuse knowledge.' It is designed to participate, as a satellite, in the duration and march of our glorious Union, to be the depository of all the rare productions of nature and art which centuries may gather, and to throw open halls sufficiently ample to contain the knowledge-seeking masses of our countrymen. Congress have stamped this character upon it, by prescribing and appropriating its vast interior compartments, and by other positive expressions of their will.

"To conform strictly to instruction, and yet keep within the pecuniary limits assigned to them; to provide the space called for, and yet avoid even the appearance of unnecessary expansion; to combine solidity with architectural beauty, and wholesome ventilation, and to satisfy at once true taste and stern economy by banishing useless embellishment, were aims always controlling and uppermost with the Regents. How far they have succeeded, time will show, and must be left to the candor of public opinion. Not doubting that the experienced and reliable contractors for the work will accomplish their undertaking, in all its details, with exactitude and fidelity, I may venture to give you an anticipation in brief of the building whose first stone is now laid.

"Its exterior will present a specimen of the style of architecture that prevailed some seven centuries ago, chiefly in Germany, Normandy, and southern Europe, which preceded the Gothic, and continues to recommend itself, for structures like this, to the most enlightened judgment. It is known as the Norman, or, more strictly speaking, the Lombard style. It harmonizes alike with the extent, the grave uses, and the massive strength of the edifice; it exacts a certain variety in the forms of its parts; and it authorizes any additions that convenience may require, no matter how seemingly irregular they may be.

"It will extend, east and west, an entire front of four hundred and twenty-six feet, having a central building of fifty by two hundred feet in the clear inside, with two towers; two wings of unequal fronts, the east one forty-five by seventy-five feet in the clear inside, with a vestibule and porch attached to it; the west one thirty-four by sixty-five feet in the clear inside, with a northern semicircular projection. These wings will be connected with the central building by two ranges sixty feet in length in the clear inside. It will have a central rear tower, and other towers of different heights, sizes, and characters, two of them placed in the wings. All these numerous towers are essential to arrangements within, as flues, stairways, ventilators, and detached rooms; and are of different heights, varying from sixty to one hundred and fifty feet.

"The first story of the central building will be occupied by the library, the chief lecture-room, and the principal hall; the second story by the museum. The laboratory and chemical lecture-room will occupy the east wing; the gallery of art the western wing and western connecting range. The chosen material is a freestone of a lilac-gray color, drawn from a quarry on the banks of the Chesapeake and Ohio canal, near Seneca creek, and twenty three miles from this spot.

"It is gratifying to me to be able to accompany this imperfect sketch with the statement, that the entire pile is to be finished, and furnished, and fitted up, for a sum less, by thirty-seven thousand dollars, than the one set apart by Congress as applicable to the building alone.

"How best to put this Smithsonian Institution in progress; to give it definite character and views; to shape its line of march as Congress has either ordered or intimated that it should be, and to let the testamentary purpose be apparent in all its operations, was a task on which ability and much consultation have been expended. There were, I may almost say, necessarily, and of course there were on this cardinal point, great diversities of sentiment and construction, as there had been during the masterly debates which prefaced the passage of the law. What constituted '*knowledge*,' in the sense of Smithson's bequest? In what manner shall its '*increase*' be provided for? By what method shall its '*diffusion*' be sought? Should the developments of the laboratory be more engrossing than the stored resources of the library? Will oral expositions or printed treatises be preferable? Are permanent professorships to be systematized, or temporary teachers to be enlisted? In fine, what should be the instruments and the orbit of an establishment whence the light of knowledge was required constantly to radiate among men?

"They to whom was confided the resolution of these problems into practical measures, have felt the weight and delicacy of their mission. They began by profoundly studying the subject in its several aspects. They cherished with ardor, and discussed with freedom, their respective projects. The conflicts of upright minds, however, rarely fail to end in mutual concession and compromise; and thus scarcely a single measure was adopted except by unanimous concurrence. The Regents have submitted their labors and conclusions to the country—the report of their proceedings was duly made for legislative supervision; and may they not confidently hope for (what they know nothing of theirs can succeed without) the co-operation and sympathy of the American people?

"There are some results to be anticipated from the success of the institution, which, though not as obvious as others, are nevertheless such as no sound American heart can wholly disregard, and which it may not be misplaced to glance at. That we shall fulfill, in the presence of watchful civilization, an admitted obligation, and that the common mind of our country, on which the permanency of its liberties so closely depends, will be exalted and invigorated, are considerations abundantly strong to rally us all to the manly effort. No greater shame, and no greater loss can readily be incurred, than would be consequent on ignoble failure. But may it not be justly said, that the mild and genial influence of this establishment will strengthen and tighten the cords of our Union, and give to the capital of that Union a new charm, with greater stability?

"The Smithsonian design is, as I have already suggested, a peculiar one. It cannot, as a scene of educational training, have any pretensions or provoke any jealousies. It is no rival of the many admirable schools which adorn the respective States, and can in no manner intrude upon their spheres of action. Yet it will be a factory and a storehouse of knowledge, accessible to all the agents of this vast confederacy—its executive, legislative, judicial, civil, military, foreign and domestic agents. It will be the recipient, too, of such fruits of the labors, and such acquisitions of the enterprise and travels of these agents, as may contribute to illustrate, and explain, and facilitate the public service, or to give precision and vigor to its operations of every kind. As a resource and a sanctuary for intellect, the institution can hardly fail to become an object of patriotic pride and attachment, and must be felt as a persuasive inducement to preserve inviolate the constitution, with whose fate its own is identified.

"I will not dwell upon its special claim to the fostering kindness and hospitality of the Metropolis. Her citizens doubtless appreciate that justly. By designating Washington for its local habitation, the generous testator has summoned the intelligence, the courtesy, and the philanthropy of her inhabitants, as auxiliaries to his beneficent project. Already it has added to her social scene a fixed star, whose beams pervade the scientific world; and, ere long, this rising temple, consecrated to the highest of human pursuits, KNOWLEDGE, will give fresh attraction and firmness to her destiny.

"Mr. Dallas having concluded, a national salute was fired by the Columbian artillery, while the band played a national air.

"The benediction was then pronounced by the Rev. F. S. Evans, and thus were concluded the ceremonies of the day, which were witnessed by at least six or seven thousand persons."

THIRTY-FOURTH MEETING—MAY 25, 1847.

Present, Messrs. Seaton and Totten.

Mr. C. Buckingham appeared before the committee, and represented that, in laying the water pipe from the fire plug on the Market square to the site of the Smithsonian building, according to his contract, (see page 124,) he had incurred (over the amount of $650, as agreed on in that contract) an excess of expenditure which, including the sum of $84 for his personal services, amounted to $138 23; as shown in the following specification of items:

Building Committee of the Smithsonian Institution,

MAY 18, 1847. *To C. Buckingham.*

To lead pipe to conduct water from avenue to the site of building, 8,090 lbs., at 6⅓ cents - - - -	$536 18
107 lbs. of lead pipe, at 7½ cents - - - -	9 50
156 lbs. of lead pipe, at 7½ cents - - - -	11 70
iron pipe across the canal - - - - -	42 75
plumber's bill for making joints - - - -	36 10
excavation and filling in same - - - -	30 00
one hand, ten days, at $1 50 - - - -	15 00
one laborer, ten days, at $1 - - - -	10 00

To two stop-cocks - - - - - -	$5 50
boxes in pipe at canal, and box at end - - -	3 00
a cylinder for cock at Market square - - -	2 50
relaying pavement on 9th street and market - -	2 00
my own services 28 days, at $3 - - - -	84 00
	788 23
	650 00
	138 23

The amount of $138 23 Mr. Buckingham asked to be allowed, over and above the amount in the contract agreed to be paid to him.

Mr. Buckingham further alleged, in support of his request, that he had laid down *extra* strong pipe, instead of strong pipe, as by his contract he was alone bound to lay—say about 1,800 lbs. weight of pipe beyond the contract, at 6½ cents, making $117; that when he received this pipe he had called on one of the committee, (Mr. Seaton,) and informed him that he proposed to return it, as his loss in so doing would have been but $50, in the shape of freight; but was dissuaded by Mr. Seaton from so doing.

The committee declined acting upon Mr. Buckingham's application, but informed Mr. B. that they would lay the case before the Board of Regents.

The committee instructed Mr. Seaton to pay over to Mr. Buckingham the amount of his contract, to wit, $650; which was accordingly done.

Mr. Seaton stated to the committee, that on the 22d inst. Mr. Downer, contractor for the erection of the fence enclosing the Smithsonian lot, (see page 125,) had represented to him (Mr. S.) that the said fence would cost him much more than the sum of $400, for which he contracted to erect it; and that he (Mr. Downer) offered to relinquish to the committee all the work he had already put on the fence; they releasing him from the contract and paying him the cost of the materials purchased.

The committee, after consultation, decided that it was inexpedient either to release Mr. Downer from his contract, or to make him any allowance beyond the sum in that contract specified to be paid for the work. And the superintendent was instructed to inform Mr. Downer what had been the decision of the committee in his case, and in that of Mr. Buckingham.

Mr. Seaton submitted to the board the following letter, which had been forwarded by Mr. Owen from Indiana, with a request that it be spread on the journal of the committee:

OFFICE OF NEW JERSEY R. R. AND TRANS. Co.,
New York, April 8, 1847.

DEAR SIR: I am instructed by the directors of the New Jersey Railroad and Transportation Company to inform you, that it is not in their power to give a favorable reply to your application for reduced rates of fare over their road, in favor of Mr. Renwick, as the architect of the Smithsonian Institution. The board, as I mentioned to you, do not feel themselves authorized to act in favor of applications in cases where there may be a diversity of opinions and interests among the stockholders whom they represent.

I am, respectfully, yours,

ROBERT SCHUYLER,
Vice President.

Hon. R. D. Owen,
New Harmony, Indiana.

And, on motion, the committee adjourned.

THIRTY FIFTH MEETING—July 23, 1847.

Present, Messrs. Seaton and Totten.

Mr. Seaton submitted from one of the contractors the following letter:

Washington, *June* 1, 1847.

Gentlemen: By an agreement between Mr. Cameron, my present partner, and myself, I have determined (provided it be agreeable to you) to retire from the firm of Dixon and Cameron, as contractors of the Smithsonian Institution. I am anxious to be released from all responsibility, provided the building committee should deem proper to release me.

Mr. Cameron offers Mr. Horace Butler, of New York, as his security for the completion of the building, should the committee deem the same sufficient.

Yours, very respectfully,

JAMES DIXON.

To the Building Committee
of the Smithsonian Institution.

This letter was, without any action upon it, on motion, laid on the table.

Mr. Seaton submitted from Mr. Cameron, one of the contractors, the following letter:

July 10, 1847.

Gentlemen: In consequence of the withdrawal of Mr. Dixon from the contract for erecting the Smithsonian building under your charge, which leaves me wholly dependent on my own funds to fulfil the contract which we jointly entered into with your honorable body, I would respectfully solicit of the committee the privilege of being paid once a month on my contract, with the architect's certificate, in place of every two months. My expenses for work, and also for materials, and heavy outlay at the Seneca quarries, and payments to my men once every two weeks, absorb my means very fast.

Praying you, gentlemen, to take these things into your consideration, I beg to add, that the compliance of the committee with this, my respectful request, will much oblige your obedient and humble servant,

GILBERT CAMERON.

To the Building Committee
of the Smithsonian Institution.

After consultation with the architect, it was

Ordered, That payments be hereafter made to the contractor monthly, upon the architect's estimate, and with reduction of fifteen per cent. as heretofore.

Mr. Seaton stated to the committee, that on examining the fence around the Smithsonian lot, though executed according to contract, he believed it would be insecure and exposed to frequent injury without a stout top-rail; and he submitted, on this subject, from the architect, the following:

July 22, 1847.

Dear Sir: Mr. Carr has made an estimate for putting a 3 × 1½ inch top-rail on the fence, with two wrought iron nails to each paling, and says that it can be done for sixty dollars.

Will you be so kind as to let me know by McPeak whether he shall proceed with it?

Very truly and respectfully yours,

JAMES RENWICK, Jr.

W. W. Seaton, Esq.,
Member of Building Committee.

On motion, it was

Resolved, That the architect be authorized to contract for the addition of a 3 × 1½ inch top-rail, to be firmly nailed to the fence, at a cost not exceeding sixty dollars.

On motion of Mr. Seaton, it was further

Resolved, That the architect be authorized to make a contract for whitewashing the fence around the lot, at an expense not exceeding sixty dollars.

Mr Seaton submitted, on the subject of a resolution heretofore passed by the Committee, (page 120,) the following letters, which he received from Mr. Owen:

Suydenham, near Philadelphia,
May 20, 1847.

My Dear Sir: Referring to my former letter, I now enclose you the answer from the Girard College, through their architect, Mr. Walter, which would have been transmitted immediately, but that I was from home when it arrived. I regret its nature, and endeavored by personal exertions to render it otherwise, but without success.

The engraving of the college, to which Mr. Walter alludes in no commendatory terms, I will leave with my son, 98 South Fourth street, Philadelphia, (Benjamin Rush,) subject to your order at any moment, should you desire to have it.

On the eve of my departure on the French mission, I cannot lose this occasion of saying with what constant interest I shall continue to follow up the proceedings of the Smithsonian Regents; and of adding, that if it ever be thought I could render the least service to the institution while in Paris, it would afford me the greatest pleasure to be called upon.

I beg you to believe in the esteem with which I am, dear sir, very faithfully yours,

RICHARD RUSH.

Hon. Robert Dale Owen.

GIRARD COLLEGE, *May* 8, 1847.

DEAR SIR: I received your favor of the 15th ultimo, enclosing a letter from the Hon. Robert Dale Owen, both of which I laid before the building committee of the Girard College; and I am sorry to say, that in consequence of their having no power nor right to expend the funds intrusted to them for any other purpose than the building of the college, they find themselves unable to comply with the request.

They desire me to say that they highly appreciate the flattering notice Mr. Owen has taken of the work under their charge, and their inability to meet his views by furnishing an engraving for the contemplated work.

The only engraving of the college over which they have any control is no doubt entirely too large for the proposed book, and its execution is not such as would do credit either to the institution or the college.

I send you an impression, by which you will see that it is by no means fit for a work like the one in question.

Very respectfully, your obedient servant,

THOS. U. WALTER.

Hon. RICHARD RUSH.

And, on motion, the committee adjourned.

THIRTY-SIXTH MEETING—OCTOBER 18, 1847.

Present, Messrs. Seaton and Owen.

Mr. Seaton stated to the committee that he had received several letters from Mr. Notman, of Philadelphia, one of the architects to whom a premium of $250 had been awarded, and who at first had declined to receive said premium in full compensation for his plans; and that Mr. Notman had finally agreed to receive said premium in full, as appears from the annexed check on him (Mr. Seaton) for the amount:

PHILADELPHIA, *September* 28, 1847.

Hon. W. W. SEATON,
Regent of the Smithsonian Institution.

SIR: At sight pay to my order two hundred and fifty dollars, being in full of premium awarded me as compensation for my design for the institution, by the Board of Regents; this being my receipt in full for the same, as ordered.

JOHN NOTMAN.

$250.

Mr. Seaton further stated to the committee that Mr. Notman requested the return of his drawings, stating that "drawings are invariably returned, except the one preferred."

On motion of Mr. Owen, it was

Resolved, That the request of Mr. Notman, for the return of his drawings, be referred to the Board of Regents at their next session.

Mr. Seaton submitted from Mr. William Archer, of Washington, the following letter:

WASHINGTON, *August* 27, 1847.

SIR: I address you as a member of the building committee of the Smithsonian Institution. It will be remembered the subscriber furnished a plan, specification, and estimate of an edifice for the institution.

That plan was made to suit what was believed to be the object of the testator, and according to the true meaning of the act of Congress—to "be of the best and most durable materials, and fire-proof." That plan was received by the building committee, and taken by them to the eastern cities and shown to the artists, architects, and builders, along with, and in contrast with, the plan of Dr. Owen. And as Dr. Owen was paid for his plan, though not adopted, and as all the other architects that copied from him were paid, surely I have the same if not a better right to be paid than they, as both the committee and the architects had the benefit of my specification and estimate for comparison, or to copy from. Therefore I hope the committee will allow me the same consideration as the others.

I am, with all due respect, your obedient servant,

WILLIAM ARCHER.

To W. W. SEATON, esq.,
Building Committee Smithsonian Institution.

Mr. Seaton was instructed to inform Mr. Archer, in reply to the above communication, that he is mistaken in supposing that Dr. Owen's plan was paid for; that although the general internal arrangements of that plan were substantially adopted, and though one of the present wings is a copy, somewhat modified, of the original elevation submitted by him, (Dr. O.,) yet that he (Dr. O.) received no remuneration whatever for his plans, they being considered, like Mr. Archer's, a voluntary offering to the institution; further, that no portion whatever of Mr. Archer's design, either of its general plan or its elevation, had been adopted or copied, with or without modifications; and therefore, even if it be considered as submitted in competition with the other plans, it stands but in the same situation as many others that were returned to the respective architects without any remuneration; and finally, that the committee has no authority to award a premium or grant remuneration in this or any similar case.

The chairman submitted, as a memorandum regarding the condition of the building fund, a copy of a letter yesterday addressed by him to the Chancellor, as follows:

WASHINGTON, *October* 17, 1847.

MY DEAR SIR: I arrived here last evening from Baltimore, and called upon Mr. Seaton this morning. He showed me a letter from you, in reply to a request of his for a power of attorney to draw $7,500 of the funds of the Smithsonian Institution to pay contractors, &c., for which same $7,500 you had previously, to wit: on the 4th instant, signed a requisition; and he requested me to write to you, and comply with your request to be furnished with a copy of such portion of the minutes of our board as gives authority to draw or apply this sum.

I see you have forgotten how this matter of appropriation stands. Just previously to the appointment of the building committee, to wit: on the 28th January last, the board passed resolutions that the said committee

contract for the building at an amount not exceeding $210,000, with 10 per cent. added—say	$231,000
For warming and lighting the same	5,000
For fitting up and furnishing the same	20,000
For fencing the lot	10,000

and some other appropriations.

After which, the board passed the following resolution:

"*Resolved*, That the Executive Committee certify to the Chancellor and Secretary of the board the total amount of debts incurred, contracts entered into, and contracts authorized by the board; and that the Chancellor and Secretary, after examination and approval of the same, certify the same to the proper officer of the treasury for payment."

This, you will recollect, was done, and $250,000 of treasury notes obtained.

And they also passed, the same day, the following additional resolution:

"*Resolved*, That the Executive Committee be authorized to receive said payment in treasury notes, payable to the order of the Chancellor of the Smithsonian Institution in one year from date, bearing an interest of six per cent. per annum; and that they be further authorized to exchange $150,000 of said notes as soon as practicable for an equal amount of six per cent. stock of the United States, payable in twenty years, which stock shall be payable to the Chancellor of the institution; which said notes and stock shall be deposited for safekeeping only with the Treasurer of the United States, or such other person as they may deem proper, to be drawn out only upon checks or warrants signed by the Chancellor, the Secretary, and the chairman of the Executive Committee."

Now the amount of $7,500, which we now want, and for which you have already signed a requisition, (not the proper form; it should have been "a check or warrant signed by the Chancellor, the Secretary, and the chairman of the Executive Committee,") we desire to draw in the shape of interest, namely: the half-yearly interest due in August last *on the above treasury notes*, which treasury notes are the result of a requisition already duly made in accordance with the first of the above resolutions for $250,000, and now, as it were, in the hands of a disbursing agent.

It is clearly expedient and proper to draw the interest first, and not to touch the notes themselves till we are compelled to do so; and to obtain this interest a power of attorney from you, it seems, is necessary.

The Chancellor, Secretary, and chairman of the Executive Committee, have the full authority to draw not only the interest, but, in proportion as they may be required, the treasury notes themselves also, without any ulterior appropriation, or other action whatever, of the board.

To make our payments to the contractors, we shall have to draw a portion of the notes themselves, and sell them before New Year's day, the date when our semi-annual interest on the principal sum of $515,169 becomes due.

You may remember that the understanding was, that of the entire sum at which the building might be contracted, not more than one-fifth was to be spent by the building committee in each of the five years during which the building will be in progress of construction. Now you will see by the items of expenditure since the 1st of March last, which Mr. Seaton informs me he has sent you, that we have in the present year, so far, paid to the contractor but $14,088. I learn that the probable amount we shall have to pay to him up to the 1st January next, may be about $10,000; and up to the 19th March next, (being one year from the date of the contract,) perhaps $5,000 more; making the total payments in the first year but $29,000, instead of $41,000, (one-fourth the amount at which the building was contracted,) being the amount we were authorized to expend.

We have thus, you will perceive, husbanded our resources so as to save interest much beyond the anticipations of the board.

The building proceeds as well as could be desired; and its appearance, so far as I can learn, gives universal satisfaction.

I am, my dear sir, faithfully yours,

ROBERT DALE OWEN.

The Hon. George M. Dallas,
Chancellor.

The chairman, in connexion with the subject of the treatise on Public Architecture, of which the preparation by resolution of the 6th March last (see page 22) was intrusted to him, stated to the committee that he had commenced the collection of materials for said work, but had been able to make but little progress in it while at home, for lack of the necessary works of reference; that it was his intention now to devote his time to it, without interruption, in the hope that he might be able to complete the letter press before the meeting of the board in December, and that some of the chief illustrations were already in hands in New York.

And, on motion, the committee adjourned.

THIRTY-SEVENTH MEETING—October 22, 1847.

[Held on the site of the Institution.]

Present, Messrs. Seaton, Totten, and Owen.

Representations having been made to the committee by sundry individuals, in regard to the insufficient quality of some of the materials employed by the contractor in the building, they proceeded to the building, and after carefully examining the materials complained of, they decided that, although there were some pieces of timber in the east connecting range which were not merchantable, these were not of such a character, nor so placed, that any practical injury would result to the structure from their use; and, therefore, the committee decided that it was not necessary to condemn or remove them. They instructed the architect, however, for the future to throw out every piece of timber, no matter how unimportant its destination, which was not strictly merchantable.

The committee fully approved all the other materials used in the building.

And, on motion, the committee adjourned.

THIRTY-EIGHTH MEETING—October 26, 1847.

Present, Messrs. Seaton and Owen.

The chairman informed the committee that he had visited, in company with the architect and contractor, the several quarries of Bull run from which material is now getting out for the building, and had inspected the blocks prepared for transportation, of which a large number had accumulated in the quarry in consequence of the injury done to the canal by the freshet several weeks since. He was completely satisfied with the quality and color of all that had been quarried. The stone quarries with remarkable facility, and with such regularity that the face, as it splits, is often smooth and regular enough to resemble stone roughly dressed for the external face of a building. It resembles in this respect the granite described by Dr. Owen, (page 32,) and is quarried in the same manner.

As to the quantity, it seems, as the quarries open, to be absolutely inexhaustible; the representations of Mr. Dixon, former contractor, (see page 119,) to the contrary notwithstanding. The contractor proposes to open another quarry, immediately on the bank of the canal, and some 300 or 400 yards nearer Seneca creek than that which has heretofore furnished material; in which new quarry the face of the rock, so far as it is disclosed, promises even a better quality and color than that in the old; while the transportation from the quarry to the scow will be greatly shortened.

Nothing can be more satisfactory than the aspect of these quarries, the facility with which they are worked, the grain and tint of the material they have furnished, and their promise for the future.

On motion, the committee adjourned.

THIRTY-NINTH MEETING—NOVEMBER 1, 1847.

Present, Messrs. Seaton, Totten, and Owen.

The chairman submitted the first chapter of the work which, in accordance with a resolution of the committee (page 22) he is preparing, on Public Architecture.

It was approved.

The chairman, in connexion with the preparation of the said work, stated to the committee his intention to visit New York in a few days, as well to examine the illustrations now in progress, and put others in hand, as to consult authorities not to be found in this city.

And, on motion, the committee adjourned.

FORTIETH MEETING—NOVEMBER 9, 1847.

Present, Messrs. Seaton and Owen.

On motion of the chairman, it was

Resolved, That the architect be requested to cause to be prepared, so as to be ready next summer, the furniture of the Regents' room, as set down in the specifications, to wit: eighteen chairs and a table; and that he cause also to be made, as furniture for the Secretary's room, and to be ready at the same time, a desk, six chairs, and a small centre table.

On motion of Mr. Seaton, it was

Resolved, That the remuneration of William McPeak, messenger, be, from the date of his last payment, to wit: the second of August last, seven dollars per week.

On motion of Mr. Seaton, it was

Resolved, That the chairman order, for the use of the board, 250 copies of Senate document No. 212, being the first report of the Board of Regents to Congress; provided the cost of the same do not exceed fifteen dollars.

And, on motion, the committee adjourned.

FORTY-FIRST MEETING—November 26, 1847.

Present, Messrs. Seaton and Owen.

The chairman, on his return from New York, made the following

REPORT.

In regard to the illustrations of the work on Public Architecture, I find that to procure execution in a manner that shall be creditable to the institution, will cost more than I had anticipated. Mr. Drayton, who has charge of the publications of the Exploring Expedition, and has, in consequence, great experience, both in regard to the relative talents of engravers and to the proper cost of engravings, has afforded me much assistance in this matter. We found it impossible, however, to contract for the steel engravings, giving two perspective views of the institution, one from the southeast, and the other from the northwest, and executed in the best style of art, for less than from three hundred and fifty to four hundred dollars for the two; which is fifty per cent. more than I had expected to pay.

Having satisfied myself, however, that engravings of this character could not be obtained for less, I empowered Messrs. Sherman and Smith, corner of Broadway and Liberty street, to whom Mr. Drayton recommended that they should be intrusted, to proceed with one specimen; after which, they would be able to fix the exact price at which the two could be completed.

For the reasons above stated, and considering the very limited amount placed at the disposal of our committee, for illustrations, I judge it prudent chiefly to trust, for the other illustrations, to wood-cuts, which are now executed in New York in very good style, and which will not cost more than half as much as steel engravings.

Accordingly, I called on Mr. Adams, by whom were executed the wood-cuts in Harper's Pictorial Bible, and who has since, as I learn, retired from the profession. I had been advised to consult him as one who knew more about the relative talents of wood-cutters in this country than probably any other man, and he recommended, as the best for architectural engraving, Mr. John H. Hall, Fulton street. I had several interviews with Mr. Hall, obtained his prices, and inspected several specimens of his work, with which I was well pleased, and of which two are herewith submitted to the committee. The effect does not seem to me greatly inferior to that of steel engraving.

Mr. Hall offered to execute the perspective view of the Gothic plan of Mr. James Renwick, ordered by resolution of this committee of April 10, (see page 120,) and which requires more work than the perspective view of the institution, for $100.

It will be necessary to employ more than one wood-cutter, in order to complete the illustrations in reasonable season; and if the committee decide that it is best to procure the illustrations chiefly on wood, I have made the arrangement for putting them in hands. Mr. Roberts, whom I stated in my report of April 6 (see page 117) to have been recommended by Mr. Durand as the best wood-cutter in this country, I found exclusively engaged by one of the tract societies.

In regard to the application made by resolutions of this committee, under date April 19, to the vestry of Grace church, and of Trinity church, and to the firm of Alexander Stewart & Co., for plates of Grace church, Trinity church, and Stewart's new marble store, I have to state that the Grace church vestry have liberally agreed to pay one hundred dollars for a plate of their church, on the terms of our resolution. The Trinity vestry have not yet come to a final decision. Mr. Stewart was not seen, though twice called on; but one of his partners informed Mr. Renwick that they would probably furnish an engraving of their building, as it is to be ultimately completed.

By the terms of our resolution, the engraving of Grace church must be executed on steel or copper; and as it is a much less elaborate engraving than that of the Smithsonian building, Mr. Drayton thinks we can have it executed on steel for a hundred dollars.

Even if we decide to let all the other illustrations be cut on wood, it will, I think, be impossible to execute those already embraced in our resolutions, (see page 120,) and such as are indispensable to a due explanation of the text to the general reader, for the sum of $1,000, to which the appropriation is at present limited. Nor do I believe that the treatise itself, including the appendix, can be advantageously condensed into a hundred and fifty pages of letter-press, as by the agreement with Wiley & Putnam (page 115) it was stipulated it should. I deemed it proper then to seek to obtain from these publishers a conditional supplement to that agreement, based on the contingency that the Board of Regents might vote an additional appropriation. They agreed to the proposal I made to them, and signed the following

Supplement to the agreement of April 3, 1847.

Whereas, by an agreement made the third day of April, 1847, between Wiley & Putnam, publishers of New York, and Robert Dale Owen, on behalf of the building committee of the Smithsonian Institution, regarding the publication of a treatise, to be entitled "Hints on Public Architecture," it was stipulated that the illustrations of the said treatise (that is to say, its engravings and wood-cuts) should cost not less than one thousand dollars, and that the number of pages of said treatise should not exceed one hundred and fifty pages of letter-press: Now, therefore, it is further agreed, that in case the said building committee should see fit to increase the value of the said illustrations, then the said Wiley & Putnam agree that the number of pages of letter-press may be proportionably increased; as, if five hundred dollars additional be expended for the illustrations, then one half of one hundred and fifty pages—say seventy-five pages—may be added to the letter-press; and so of any larger or smaller sum: *Provided, however*, that the entire number of pages of letter-press shall not, in any case, exceed two hundred and fifty.

Witness our hands and seals this 22d of November, 1847.

WILEY & PUTNAM. [L. S.]

In presence of THOS. B. GRAVES,
as to Wiley & Putnam.

ROBERT DALE OWEN,
on behalf of the Building Committee
of the Smithsonian Institution.

I recommended that in the report of the building committee to be made to the board at their next meeting, it be proposed that they should increase the appropriation accordingly.

I examined, with a good deal of care, most of the churches that have been recently erected and are now in progress of erection in New York. They are, as a general rule, very creditable to the architectural talent of the country. Among those yet unfinished, one of the most promising is St. George church, (Episcopalian,) situated at the corner of Sixteenth street and Stuyvesant square, built in the same style as our building, namely, in the Lombard style of the twelfth century. The general effect will, I think, be very fine, especially of the front towers. The rear terminates in an absis, somewhat similar to that on the north front of our west wing—a beautiful feature. The building when completed, it is said, will cost one hundred and fifty thousand dollars; and though I could not obtain its exact size, it will be one of the largest churches in New York, being some ninety feet in width. Its galleries are to be supported from the side walls, without pillars. Some of its details appeared to me faulty, as the corbel course along the upper portion of its side walls and on its towers is feeble, and not sufficiently projecting for a building of such magnitude; and I think the architect would have done better to trust to the flat Norman buttress running into the corbel course above, rather than to introduce a buttress of a much later date, deep and heavy, and which, from many points of view, wholly conceals the windows. The latter (the windows) are both wider and higher than is usual in the Lombard style; but I think the effect is good.

I purchased, and herewith submit, a perspective view of this church, as one of the first proofs that the opinion I expressed when the style of our building was objected to on the score of its singularity, (namely, that a greater objection might hereafter be, that Lombard buildings would be repeated all over the country, as Grecian and Gothic have been, until we were tired of them,) is not unlikely to be verified.

I visited also some of the older churches—among the rest St. Paul's, in Broadway, near the Astor House. It exhibits great beauties and great defects. Its spire is, in my opinion, one among the prettiest in its style (the Roman) in the world; and as such, I had it daguereotyped, and shall use it as an illustration in our work. The interior, with its Grecian pillars and broken entablatures, forming imposts for the arches of its galleries, furnishes a striking illustration of the bad effect produced by that heterogenous mixture of Gothic forms and Grecian details that goes under the name of Roman.

Through the kindness of Professor Renwick, I obtained admittance to the New York Society library, and spent some time there examining its works on architecture.

I also obtained, through Professor Renwick, an opportunity of examining Canina's great work on Egyptian, Grecian, and Roman architecture, published a few years since at Rome. It may be said, in each style of which it treats, almost to exhaust the subject—at least to furnish the best and most extensive modern illustrations of Egyptian, Grecian, and Roman buildings, to be found in any one collection now extant. As almost all the works on architecture heretofore purchased by us have been on Gothic and Norman architecture only, I think this work would be a valuable and important purchase. It is the property of a private gentleman, Mr. Parish, who imported it; and I understand from Professor Renwick it could be had from him at first cost in Rome, with duty added. It would be of much use to me in the preparation of the work I have now in charge.

At Philadelphia I saw Mr. Notman, and at New York Mr. Arnot; both of whom expressed a desire that their designs should be published in our work. I think it likely that if we agreed to furnish each of them a hundred copies of the engraving, (which we can obtain at the cost of paper and printing,) they would supply us, at their own cost, with a reduced perspective view from which to engrave; and if the board votes us an additional appropriation, I recommend that such a proposition be made to them; and also to Mr. Daniel, of Cincinnati, who has signified to me a similar desire in regard to the publication of his design—a design, as the committee may remember, in the Italian style.

At Philadelphia I called upon Mr. Joseph R. Ingersoll, who has always shown much interest in the institution, and he has promised to procure for me, from authentic sources, the exact dimensions of the Girard College building; its cost to the present time; and the estimated cost of its completion. He also stated to me that he would endeavor to procure some particulars regarding the style and dimensions of a large cathedral of which the foundations have recently been laid by the Catholics of Philadelphia.

I made the acquaintance in New York of Mr. Kellogg, the artist who has charge of Mr. Power's "Greek slave." He expressed to me a strong desire that some arrangements might be made by which our institution should obtain that statue, and fit up one of the rooms in our building (perhaps in one of the central towers) for its reception. It is, in my opinion, one of the finest statues that has ever been produced, in ancient or modern times, and as well worthy of a separate tribune as the Venus de Medicis.

ROBERT DALE OWEN.

WASHINGTON, *November* 26, 1847.

On motion of Mr. Owen, it was

Resolved, That Professor Renwick be authorized to purchase on behalf of the institution, of Mr. Parish, Canina's work on Egyptian, Grecian, and Roman architecture, provided the same can be obtained at the first cost in Rome, with the duty added.

Resolved, That the chairs for the Regents' room and Secretary's room be covered with maroon-colored leather.

No. 3.

Report of the Executive Committee, on the state of the funds.

The Executive Committee report the state of the funds of the institution, on the 1st instant, as follows:

The Board of Regents have drawn from the treasury, of accruing interest, to pay the current expenses of the institution		$40,660 81

The disbursements from this fund have been as follows:

For expenses of Board of Regents and its committees	$3,876 47	
For materials and erection of specimen walls, and superintendence thereof	393 63	
For books purchased	555 99	
For compensation to architects for designs, &c.	1,325 00	
For recording and copying	378 98	
For services of Assistant Secretary	200 00	
For services of messenger	402 50	
For postage	28 99	
For printing	347 63	
For examination of quarries, including expenses of geologist	370 76	
For perspective views of institution	200 00	
For chemical examination of building-materials	94 50	
For expenses connected with ceremonies, &c., on the occasion of laying the corner stone of building	185 37	
For stationery	112 83	
For philosophical and chemical apparatus	1,571 47	
For salary of Secretary	1,750 00	
For expense of first volume of Transactions, in part	203 53	
For incidentals, including furnishings, freight, carriage, hack-hire, &c.	557 20	
For surveying and recording levels of institution grounds	112 50	
For expenses of building, including superintendence	25,002 67	
	37,670 02	
Balance in the hands of Corcoran & Riggs, December 1, 1847	2,990 79	
		40,660 81

The entire amount of the funds of the institution on the 1st instant was $758,159 79, being $861 79 more than the amount of its funds on the day of the passage of the act by which it was organized; and on the first of next month there will be due of interest, $15,455.

The institution has no debts, except a few unimportant items not yet rendered, and also an account for the seal of the institution.

W. W. SEATON,
ROBERT DALE OWEN,
A. D. BACHE.

DECEMBER 15, 1847.

No. 4.

Proceedings of the Board of Regents of the Smithsonian Institution, from the date of their last annual report to the 27th December, 1847.

WEDNESDAY, December 8, 1847.

This being the day fixed, by resolution of September 9, 1846, for the regular meeting of the Board of Regents, the board convened at the room of the Vice President of the United States, in the Capitol.

There appeared George M. Dallas, the Chancellor, and the following Regents: A. D. Bache, Sidney Breese, Gideon Hawley, Henry W. Hilliard, Robert Dale Owen, William W. Seaton, and Joseph G. Totten.

A quorum being present, the board proceeded to business, the Chancellor in the chair.

Mr. Owen, from the Building Committee, presented a report, together with a complete copy of the journal of the committee.

Laid on the table.

FRIDAY, December 10, 1847.

The board met pursuant to adjournment.

Present, in addition to those in attendance at the last meeting, Lewis Cass and J. A. Pearce.

The Secretary made a report relative to the transactions of the past year, the acceptance of memoirs, the purchase of apparatus, &c., and including a programme of organization.

SATURDAY, December 11, 1847.

Mr. Owen, from the Executive Committee, made a report relative to a plan of finance and of general appropriation of funds up to the 19th of March, 1852, or until the building shall be completed.

On motion of Mr Hawley,

Resolved, That the report of the Building Committee, the report of the Secretary, and the report of the Executive Committee, be inserted at large in the journal of the board.

(See documents 1, 2, 5, and 6.)

MONDAY, December 13, 1847.

On motion of Mr. Owen,

Resolved, That the Executive Committee cause to be printed, in the same form as the report on organization, one thousand copies of the address delivered by the Chancellor on occasion of laying the corner-stone of the institution, and that the Secretary cause to be laid on the desk of each member of the Senate and of the House of Representatives two copies of the same, as soon as it shall be printed.

On motion of Mr. Bache,

Resolved, That so much of the programme presented to the Board of Regents by the Secretary of the Smithsonian Institution, in his recent report, as is contained in sections Nos. 1 and 2 of said programme, be provisionally adopted; that the Secretary be charged with the execution of its details, as far as the funds appropriated for the several objects may permit, and that he be directed to report annually to the board his progress in the execution of this duty.

Resolved, That the Executive Committee be directed to report, after consultation with the Secretary, to the Board of Regents, in relation to the special appropriations desirable for the year beginning March 19, 1848, in execution of parts of the programme which have been provisionally adopted.

Mr. Owen asked to be excused from service as a member of the Executive Committee, representing to the board that the most important duties of this committee would hereafter be to select among various scientific objects and researches those to which appropriations should be made, and that there were gentlemen on the board, not members of the committee, particularly a Regent from Washington, better qualified than himself to make such selection.

The motion to excuse Mr. Owen from service on the Executive Committee being put by the Chancellor, it was lost.

Mr. Totten asked to be excused from service as a member of the Executive Committee, representing to the board that the time spent by him as a member of another committee of the board was as much as he could spare from his professional duties.

The motion to excuse Mr. Totten being put by the Chancellor, it was carried.

Thereupon the board proceeded, by ballot, to fill the vacancy thus created; and, on counting the ballots, it appeared that Mr. Bache was elected.

The Secretary presented a list of books received in virtue of the provision contained in the tenth section of the act organizing the institution; also, a list of books presented to the institution.

WEDNESDAY, December 15, 1847.

Mr. Seaton, from the Executive Committee, presented a report on the state of the finances of the institution.

Mr. Bache, from the Executive Committee, to whom was referred the resolution of the 13th instant, relative to appropriations for the year commencing on the 19th of March, 1848, made the following report:

"The committee, after consultation with the Secretary, recommend the passage of the following resolution:

"That the appropriations for the year commencing on the 19th of March, 1848, for objects other than those provided for out of the building fund, be for the present as follows:

"For the publication of Transactions, the sum of three thousand and five hundred dollars;

"For computations relative to occultations, two hundred and fifty dollars;

"For purchase of magnetic instruments, six hundred dollars;

"For instruments and other expenses connected with meteorological observations, one thousand dollars;

"For arrangement of apparatus, &c., in such portion of the building as shall be completed next autumn, one hundred and fifty dollars;

"For expenses of lectures, including lighting of lecture-room, five hundred dollars;

"For publication of scientific reports, five hundred dollars;

"For general expenses of the institution, including salary of officers, expenses of board and its committees, clerk hire, postage, &c., seven thousand five hundred dollars;

"For purchase of books, and incidentals connected therewith, one thousand dollars;

"Or so much of each of said sums as may in the said year be required."

On motion of Mr. Hough, the above resolution was adopted.

On motion of Mr. Bache,

Resolved, That the Chancellor of the Smithsonian Institution be the organ of communication of the Smithsonian Institution with the public, and that the Secretary be the organ of communication between the officers of the institution and the Chancellor, and also between the officers of the institution and the board.

FRIDAY, December 17, 1847.

On motion of Mr. Hough,

Resolved, That by the appointment of Hon. Richard Rush, of Pennsylvania, to the office of minister plenipotentiary to France, and his continued absence from the United States, and residence at a foreign court for an indefinite length of time under such appointment, his office of Regent of the Smithsonian Institution has become vacant, and that Mr. ——— be a committee to introduce into, and procure to be passed through the Senate of the United States, the necessary joint resolution of the two houses of Congress for the appointment of ——— a Regent of said institution, to fill such vacancy, pursuant to the third section of the act incorporating said institution.

On motion of Mr. Hough, it was

Resolved, That the first blank be filled with the name of Mr. Pearce, and the second with that of Mr. Owen.

On motion of Mr. Bache, it was

Resolved, That the Board of Regents recommend to the establishment the election of the Hon. Richard Rush, of Pennsylvania, late a member of the Board of Regents, as an honorary member of the Smithsonian Institution.

On motion of Mr. Seaton, it was

Resolved, That the Chancellor be deputed to request a meeting of the establishment for the purpose of proposing the Hon. Richard Rush as an honorary member of the Smithsonian Institution.

On motion of Mr. Seaton, it was

Resolved, That the Chancellor be requested to address a letter to Mr. Rush, conveying to him the regret of the Board of Regents at his absence, and consequent retirement from the board.

FRIDAY, December 21, 1847.

In addition to the members previously mentioned as attending the session of the board, Mr. Choate, of Massachusetts, appeared.

The Secretary presented various letters and reports from different individuals and societies, recommending the plan of organization of the Smithsonian Institution given in the programme presented to the board in his report; which, on motion, were laid on the table.

The Secretary presented a letter addressed to himself by Professor Jewett, containing suggestions as to the formation of the library.

(See appendix to document No. 6.)

TUESDAY EVENING, December 21, 1847.

The resolutions appended to the report of the Executive Committee relative to a scale of expenditure up to the 19th of March, 1852, coming up for consideration, they were adopted.

On motion of Mr. Bache,

Resolved, That the Secretary be requested to inform the Assistant Secretary, Professor Jewett, that the Board of Regents will expect him to enter upon his duties on the 19th March, 1849, at which time his salary will commence.

Mr. Choate offered the following resolution; which, on his suggestion, was laid on the table:

Resolved, That a committee of three be appointed by the Chancellor, to consider, in conjunction with the Secretary, and to report at the next meeting, what services may be rendered by the Assistant Secretary, acting as Librarian, between this time and the 19th March, 1847, and what may probably be the expense of these services.

WEDNESDAY, December 22, 1847.

Mr. Owen renewed the request previously made by him to be excused from serving on the Executive Committee, stating that if, in accordance with the tenor of a resolution heretofore passed by the board, he should be re elected Regent, his duties as a member of the Building Committee would demand much of his time, as the committee had referred to him the preparation of the manuscript of the volume on public architecture, with the publication of which they have been charged by the board; and by excusing him from service now, the board would have an opportunity, before they adjourned, to fill the vacancy.

The motion to excuse Mr. Owen from service on the Executive Committee being put by the Chancellor, it was carried.

Whereupon, by unanimous consent, the board proceeded to fill the vacancy on the Executive Committee thus created, by resolution; and,

On motion of Mr. Hilliard, it was

Resolved, That Mr. Pearce be appointed a member of the Executive Committee.

On motion of Mr. Seaton, it was

Resolved, That the salary of the messenger be hereafter at the rate of four hundred dollars per annum.

THURSDAY, December 23, 1847.

George P. Marsh, of Vermont, and Robert McClelland, of Michigan, members of the board appointed from the House of Representatives to fill the places of Mr. Owen and Mr. Hough, whose term of service has expired, appeared and took their seats, as also Mr. Hilliard, re-appointed a member of the board.

The resolution offered by Mr. Choate on Tuesday, the 21st instant, relative to the appointment of a committee of three to consider what services may be rendered by the Assistant Secretary, acting as librarian, between this time and March 19, 1849, coming up for consideration,

It was adopted.

And the Chancellor appointed Messrs. Choate, Bache, and McClelland the said committee.

The Secretary stated to the board that during the past year he had, with the consent of the Executive Committee, given a course of lectures at Princeton, for which he had received, including the rent of the house occupied by his family, a compensation of one thousand dollars. For this sum, after deducting certain expenses for clerk hire, assistance, &c., he had given credit to the board in his account for the present half year.

FRIDAY, December 24, 1847.

The Chancellor presented the following letter from Mr. Cass:

WASHINGTON, *December* 24, 1847.

SIR: Finding it impossible, consistently with my other duties, properly to execute the trust of a Regent of the Smithsonian Institution, I request that this may be considered as my resignation of that office.

I have the honor to be, very respectfully, your obedient servant,

LEWIS CASS.

To the Hon. GEORGE M. DALLAS,
Vice President of the United States.

On motion of Mr. Seaton, it was

Resolved, That Mr. Breese be requested to move in the Senate of the United States for the appointment of a successor to Mr. Cass.

On motion of Mr. Seaton, it was

Resolved, That the account of expenditures rendered by the Executive Committee, after being certified by the Chancellor and the Secretary, be entered on the journal. [See document No. 3.]

MONDAY, December 27, 1847.

Mr. Choate, from the committee appointed on the 23d instant, relative to the duty of the Assistant Secretary, made the following report, with accompanying resolutions:

The committee appointed at a meeting of the Board of Regents on the 23d instant, to inquire and report in what manner the Assistant Secretary, as librarian, may be employed (if at all) with advantage to the Smithsonian Institution, between the present time and the 19th March, 1849, respectfully present for the consideration of the board the following resolutions, embracing the matter of their inquiries, together with a report from the Assistant Secretary.

Respectfully submitted by

R. CHOATE,
A. D. BACHE,
R. McCLELLAND,
Committee.

The resolutions accompanying the report of the committee were as follows:

Resolved, That the Assistant Secretary, acting as librarian, may be employed with advantage to the Smithsonian Institution, during a portion of the time between this date and the 19th of March, 1849, in the following duties, to wit:

1. The preparation of catalogues of books suitable for the commencement of the library, in accordance with the plan of organization heretofore adopted by the Board of Regents.
2. The purchase of the more necessary books on bibliography.
3. The collection and systematic arrangement, for purposes of comparison, of the printed catalogues of the principal libraries throughout the United States; together with information in regard to the expenditures, plans of increase, and other particulars relating to the said libraries.
4. The collection of works to which the institution may be entitled under the tenth section of the act organizing the institution.

Resolved, That the Assistant Secretary, acting as librarian, be employed for the purposes specified in the foregoing resolution under the direction of a committee of three members of the board, to be appointed by the Chancellor, and to act in conjunction with the Secretary, at a compensation to be fixed by the Executive Committee, but not to exceed one thousand dollars, for any services he may render between this date and the time fixed for the commencement of his regular duties as Assistant Secretary.

The said resolutions coming up for consideration, they were adopted.

Whereupon, the Chancellor appointed Mr. Choate, Mr. Marsh, and Mr. Bache the said committee.

The Secretary presented to the board the subject of the remuneration of the Assistant Secretary for services rendered during the past year: whereupon,

On motion, it was

Resolved, That the subject of compensation to the Assistant Secretary for services rendered during the past year, be referred to the Executive Committee.

The board then adjourned *sine die*.

No. 5.

Report of the Executive Committee of the Smithsonian Institution, embodying a proposed scale of expenditure for four years from the 19th of March, 1847; being the remainder of the term of the contract for the erection of the institution building.

The contract for the institution building has been made; the building itself is considerably advanced; and the building committee have had an opportunity of ascertaining, with some degree of accuracy, the entire amount of expenditure made, or authorized, or necessarily to be incurred, on the said building, and on the lot on which it stands, until the same shall be completed—say on the 19th of March, 1852.

Some progress has also been made in the preparation of transactions, and in carrying out other measures in fulfilment of the will of the testator, to "increase and diffuse knowledge among men."

At this point of progress, the Executive Committee—knowing the great desire often expressed by various members of the board during former meetings, that the erection of the institution building, though necessarily spacious on account of the special requirements of the act organizing the institution, should not withdraw from the funds of the institution more than a moderate portion even of that accumulated interest which the appropriation by Congress authorizes to be thus employed; remembering, also, that the Chancellor and one of the members of the board have heretofore introduced resolutions embodying their wish that the sum thus withdrawn should not, if possible, exceed one hundred thousand dollars; but more especially calling to mind the fact that a certain prospective plan of finance and scale of expenditure, throughout the years in which the building shall be in progress, has been heretofore submitted to the board by one of its members, and, though not spread formally upon its minutes, did, in fact, receive the sanction of the board—ask leave here to submit a scheme of expenditure for four years from the 19th of March next, based upon that plan of finance, and differing from it only in some details suggested by the present state of the financial affairs of the institution, by which the above objects may substantially be accomplished; so that, on the 19th of March, 1852, when the building shall be completed, including its fitting up, furnishing, lighting and heating, and the lot belonging to the institution shall be laid out, planted, and permanently fenced; and when, in a word, everything shall be prepared, so that the institution can go into full operation, without any necessity to take from its current income thereafter any amount to add to its buildings or to secure or adorn its grounds, there shall still remain as a permanent fund, bearing six per cent. interest, payable semi-annually, the original capital of $515,169, and the interest that had accumulated on the same, specified in the second section of the act organizing the institution, to wit: the sum of $242,129, deducting from these two sums about one hundred thousand dollars only; or, in other words, so that the sum of $657,398, or thereabouts, should remain on the 19th March, 1852, as the permanent fund of the institution.

To carry out a plan having this desirable object in view, two conditions (both within the power of the board) are necessary: the first, that the entire cost of the building—including the complete fitting up and furnishing of the same; lighting and heating, ventilating and draining the same; supplying the same with water; laying out in grass and planting with trees and shrubs the lot; fencing the same, both with the present temporary fence and the final permanent one; also all expenses for superintendence of erection, including the cost of architect's office, and other incidentals, so as, in fact, to cover all expenses whatever that have been incurred and are to be incurred on the building, and on the lot on which it stands, until the completion of the building and of the preparation of the lot, up to the 19th of March, 1852—shall not exceed *two hundred and fifty thousand dollars;* of which the balance unexpended on the 19th of March, 1848, shall be expended in nearly equal proportions in each of the four years next following that date.

The second condition is, that the current expenses of the institution, exclusive of those just enumerated, but including the expenses of the board and its committees; the salaries of officers, including messenger; the expense of all publications, researches, or other similar undertakings; the purchase of books and apparatus; and all incidentals whatever, not enumerated in the foregoing paragraph, shall not exceed, for each one of the four years next after the 19th of March, 1848, *fifteen thousand dollars.*

The committee proceed to furnish the details necessary to substantiate the position here taken.

In pursuance of instructions contained in a resolution of the board of the 28th of January last, this committee, after certifying to the Chancellor and Secretary the amount of contracts entered into and authorized by the board, received the said amount, to wit: the sum of two hundred and fifty thousand dollars, in treasury notes, payable to the order of the Chancellor of the Smithsonian Institution, dated the 17th of February, 1847, and bearing six per cent. interest, payable semi-annually thereafter. These treasury notes are deposited for safekeeping with the Treasurer of the United States; and the board will recollect that, by its resolution of the 28th of January last, they can be drawn out only upon checks or warrants signed by the Chancellor, the Secretary, and the chairman of the Executive Committee. Of these treasury notes, ten thousand dollars were thus drawn out on the 30th of October last, to pay the contractor and other expenses. The remainder, to wit: the sum of two hundred and forty thousand dollars, still remains invested in said treasury notes. The ten thousand dollars sold netted $10,121 67, being par, with interest added to the day of sale.

By this arrangement, very favorable to the finances of the institution, the whole of its funds, both original, principal, and accumulated interest, at present amounting to the sum of $755,169, become productive; bearing, under the safest possible investment, six per cent annual interest, payable semi-annually.

So long as no more treasury notes are sold, the annual income of the institution, from the above sum thus invested, will be on original principal $30,910, and on treasury notes $14,400—together, *forty-five thousand three hundred and ten dollars* annually.

If the entire annual expenses of the institution, for building and all other purposes, could be restricted to the above sum of forty-five thousand three hundred and ten dollars, it is evident that the annual income of the institution would remain permanently at that amount.

Whenever any amount of treasury notes is sold, the interest from that source, of course, ceases. Whatever annual amount, therefore, beyond the above $45 310, shall, in the course of four years after the 19th of March, 1848, be expended by the institution, that amount, together with six per cent. interest on each item of treasury notes sold, from the date of the several sales to the 19th of March, 1852, will be so much deducted from the present investment; that is to say, from the sum of $755,169.

It remains to be seen what the annual excess beyond the above annual income will be in each of the four years next following the 19th of March, 1848, if the suggested scale of expenditure be adopted, and how much of the present capital of the institution the said excess will absorb.

The balance on hand, to meet current expenses, on the 1st instant, as will appear by reference to the bank book of the institution, herewith submitted, was $2,991. The amount of interest which will be received by the institution previously to the 19th of March next, is $22,655, to wit: on the 1st of January next $15,455, and on the 17th of February next $7, 200. These two items added to the balance in hand give $25,646; being the amount available, without encroaching on the present investment, up to the 19th of March next; that is to say, up to the termination of the first year of the building contract.

The committee, after consultation with the Secretary of the institution as to the several amounts which may be required in the course of the winter and spring, for the various objects intrusted to him; after carefully calculating, also, the expenses to arise from this time to the 19th of March, have introduced a series of resolutions, appropriating the above amount of $25,646.

The committee learned from the Secretary that the expense of the first volume of the Transactions of the institution would be considerable, on account of the number of plates; and, at his suggestion, they have put the appropriation for that object, out of the above fund, at $2,000, instead of $1,000, as formerly voted. At his suggestion, also, they have set apart for apparatus one thousand dollars. In accordance with a request made in the report of the building committee to the board, they have also increased the appropriation for the forthcoming volume on Public Architecture, from one thousand dollars to two thousand dollars. The items for contingencies, including the expenses of the board and its committees, they have put at $1,646. If, as the committee recommend, a resolution be passed that there be hereafter but one annual meeting of the board, its expense will not exceed $500 or $600, which will leave a margin of upwards of one thousand dollars for incidentals and contingencies, including the seal of the institution, not yet paid for.

After these various items have been, as the committee think, all fully provided for, so that they shall not fall upon the current expenses of the year commencing on the 19th of March next, there still remains, out of the above $25,646, the sum of seventeen thousand dollars, to be appropriated to the building fund, as by the following synopsis of receipts and appropriations will more clearly appear.

Proposed appropriations, viz:

For first number of Transactions - - - - -	$2,000
For work on "Public Architecture" - - - -	2,000

For experiments on building materials, heretofore ordered by the board	$500
For part salary of Secretary	1,500
For apparatus	1,000
For the building fund	17,000
For contingencies, including expenses of the board and of its committees	1,646
Total	$25,646

Receipts from interest, up to the 19th March, 1848, viz:

On the 1st of January	$15,455	
On the 17th of February	7,200	
Total from interest	22,655	
On hand 1st December, 1847	2,991	
Total available funds to 19th March, 1847		$25,646

By the report of the building committee, dated the 1st instant, it will be seen that the expenditure for the building and grounds, including superintendence and other contingencies, was $25,002 67; say twenty-five thousand dollars. Add to this amount the above proposed appropriation of $17,000, and it will appear, that up to the 19th of March next there is provided towards the building fund the amount of $42,000, being some six thousand dollars more than the probable expenditure to that date, as estimated by the building committee.

If the above amount of $42,000 be deducted from the entire amount of building fund, as now proposed to be fixed at $250,000, it will leave to be provided towards that fund in the four years next following the 19th of March next, the sum of $208,000. If, as proposed, this amount be spread equally over the said four years, it will give an expenditure each year for these objects of $52,000.

If, now, we deduct from the annual income of the institution as it will stand on the 19th of March next, the sum of $15,000, hereinbefore proposed to be annually appropriated for objects not connected with the building and grounds, it will leave an annual amount from accruing interest of $30,310, which may go to the building fund, so long as the present investment remains undiminished.

But if we deduct this sum of $30,310 from the annual amount still to be provided for building purposes in each of the four last years of the building contract, as shown above, to wit: from the sum of $52,000, we shall have an annual excess of expenditure over available interest of $21,690, which annual excess must be provided for by sale of treasury notes; and as, in proportion as these are sold, the interest on them until the end of the term of the building contract will be lost to the building fund, the annual excess thus to be provided for by sale of treasury notes will, if we suppose it to be drawn at the commencement of each year, (which is the most unfavorable supposition,) reduce the invested fund in the course of the four years ending 19th March, 1852, nearly $100,000, thus:

Excess during the first year - - - - -	$21,690 00
Four years interest on ditto - - - - -	5,205 60
Excess during the second year - - - -	21,690 00
Three years interest on ditto - - - -	3,904 20
Excess during the third year - - - -	21,690 00
Two years interest on ditto - - - - -	2,602 80
Excess during the fourth year - - - -	21,690 00
One year's interest on ditto - - - - -	1,301 40
	99,774 00

It appears, therefore, that, after setting aside sufficient appropriations for all objects now in progress, together with an adequate allowance for contingencies up to the 19th March, 1848, we may, commencing from that date, authorize the annual expenditure until the completion of the building of fifteen thousand dollars for objects unconnected with the building fund; and then if we restrict the building fund to $250,000, and provide that of the last $208,000 of that fund not more than one-fourth of the same—that is to say, $52,000—shall be spent in each of the last four years of the contract, we shall be able to complete the building and grounds, including all expenses thereon, without withdrawing more than one hundred thousand dollars from the present invested funds of the institution.

And as these invested funds, to wit: the sum of $755,169, amount to within $2,229 as much as the total amount of principal and interest by the charter conveyed to the institution, it follows, that by the proposed plan the building may be completed without withdrawing from the original funds of the institution, as they stood on the day it was chartered, more than about $102,000.

To the conditions necessary to bring about a result which will be confessed to be desirable, there is not, the committee think, any just objection.

The building committee, after some experience, and a careful examination of the subject, express in their report the opinion that a building fund of $250,000 will probably be sufficient.

The expediency of applying to the building fund, for four years to come, the interest accruing over and above an annual sum of fifteen thousand dollars, alone remains to be considered.

It is evident that the act organizing the institution contemplated the application of a portion of the current interest, while the building was in progress, to its erection; for, after appropriating the accumulated interest for the erection of a building, it adds, in the fifth section, "together with such sum or sums out of the annual interest accruing to the institution as may in any year remain unexpended, after paying the current expenses of the institution." The sole question, then, is, what amount of that interest may judiciously be thus applied?

It will be admitted that the amount suggested for the current expenses of the institution until the building shall be completed, to wit: the annual sum of fifteen thousand dollars, is a sufficient one gradually to bring its plans into execution, provided a considerable portion of the same be not annually expended in the purchase of books and collections. The committee think this cannot wisely or advantageously be now done; and that for the present, the only purchase made of books for the institution should be, as heretofore expressed in the report of the Committee on Organization, of "such valuable works of reference as in the prosecution of its plan may be required." In accordance with these views the committee report a resolution.

If any considerable amount of books, beyond those required for present reference, be purchased at this time, they will lie in boxes, with much risk of injury, and no possibility of being accessible to the public. Nor, the committee think, will it be prudent or desirable while the main building is in progress, and while temporary arrangements must be made in one of the wings for the reception of such works as by purchase, by exchange, and from other sources, shall have accumulated in the library, to open that provisional library to the public. Few would be likely to resort to it as a place of study, amid the noise and confusion incident to the erection of an extensive building.

Again, though no large sums be spent directly for books, for the present, every appropriation made for the publication of Transactions or other works, to be distributed to learned and scientific societies throughout the world, is a virtual contribution to the library. It cannot be doubted that the exchanges to which, by such extended distribution, the institution will be entitled, will in many cases overpay, in the shape of additions to the library, the cost of the works distributed.

And, finally, it should be remarked, that under the scale of expenditure herein proposed, the sum of a hundred and forty thousand dollars will be added to the original capital of the institution; making an addition to its income of eight thousand four hundred dollars annually, forever; one half of which, by the resolutions hereinafter recited, commonly called the compromise resolutions, will inure to the benefit of the library. It was doubted, at the time of the passage of these resolutions, whether, under their operation, and supposing the entire income of the institution to be the interest from its original capital, the permanent annual appropriation for the purchase of books could exceed from four to five thousand dollars.

By the operation of the present plan it may, therefore, be considered as doubled, or nearly so. The additional four thousand two hundred dollars added by that plan annually, forever, to the library appropriation, is far more than an equivalent for the delay it presupposes, in the accumulation of works not wanted for immediate reference, or present purposes; a delay extending only to the period when suitable permanent arrangements can be made for their reception.

In accordance with the views herein given, the committee append to their report a series of resolutions, of which they recommend the passage.

All which is respectfully submitted.

W. W. SEATON,
ROBERT DALE OWEN,
JOSEPH G. TOTTEN,
Committee.

Resolutions appended to the report of Executive Committee.

Resolved, That the balance on hand, standing to the credit of the chairman of the Executive Committee, on the first of December current, together with all interest accruing to the institution up to the 19th of March next, to wit: the interest due on the first of January next, and on the 17th of February next, amounting in all to the sum of $25,646, be appropriated as follows—that is to say:

1. To the publication of the first volume of the Smithonian Contributions to Science, two thousand dollars; being one thousand dollars in addition to the thousand dollars appropriated for this object by resolution of the 26th of January last.

2. To the publication of one thousand copies of a brief treatise, to be entitled "Hints on Public Architecture," heretofore authorized to be published by the building committee, to be illustrated with designs of the institution buildings, &c., two thousand dollars; being one thousand dollars in addition to the thousand dollars appropriated for this object by resolution of the 5th of February last.

3. For experiments heretofore authorized to be instituted to determine the economical value of building-materials throughout the United States, five hundred dollars; being the same sum appropriated for that object by resolution of the 1st of March last, but still unexpended.

4. To purchase philosophical and chemical apparatus, one thousand dollars; being a portion of the four thousand dollars appropriated for this object by resolution of the 4th of December last.

5. To part of salary of the Secretary, fifteen hundred dollars.

6. To the building fund, seventeen thousand dollars.

7. To incidental expenses and contingencies, including the expenses of the board and its committees, sixteen hundred and forty-six dollars, or so much of that sum as may be required for these purposes.

Resolved, That during each of the four years next following the 19th of March, 1848, being the four years throughout which the unexpired term of the building contract runs, the proportion of expenditure shall be as follows—that is to say: out of the interest annually accruing to the institution, the sum of fifteen thousand dollars in each year may be appropriated for the current expenses of the institution, exclusive of all expenditures whatever properly belonging to the building fund, but including the expense of the board and its committees, the salaries of officers, including messenger, the expense of all publications, researches, or other similar undertakings, the purchase of books and apparatus, and all incidentals whatever, not connected with the expenditure on the building or grounds. And the remainder of the interest accruing to the institution shall, during each of these four years, be appropriated to the building fund.

Resolved, That it is the deliberate opinion of this board that the entire cost of the institution building—including the complete fitting up and furnishing of the same; lighting and heating, ventilating and draining the same; supplying the same with water; laying out in grass and planting in trees and shrubs the lot, fencing the same, both with the present temporary fence and the ultimate permanent one; also all expenses for superintendence of erection, including the cost of architect's office and other incidentals; so as to cover all expenses whatever that have been and are to be incurred on the building and on the lot on which it stands, until the completion of the building and of the preparation of the lot, up to the 19th of March, 1852—shall under no circumstances exceed the sum expended thereon up to the 1st of this month, to wit: the sum of twenty-five thousand dollars, and seventeen thousand dollars by a preceding resolution appropriated to the building fund; together with the annually accruing interest over $15,000 in each of the four years next following the 19th of

March next, as in a former resolution provided, and the further sum of one hundred thousand dollars, to be raised by sale of that amount of the treasury notes now the property of the institution, to be sold at not less than their par value; which said sum of seventeen thousand dollars, together with said annual interest over and above fifteen thousand dollars, and said sum of one hundred thousand dollars now invested in treasury notes, is hereby declared to be the building fund of the institution. And the building committee are hereby expressly instructed and required so to arrange their expenditures on the building and lot, including all items heretofore enumerated, that these expenditures shall not exceed the amount of the said building fund, it being understood that the said building committee have discretionary power in regard to such modifications and alterations as may suggest themselves in the progress of the building, within the limits of the said building fund, but no other. And if, in order to keep within the limits of expenditure by this resolution prescribed, it shall be necessary so to modify the plan as to reduce the cost of some portion of the building, the building committee are hereby authorized and empowered so to do.

Resolved, That the building committee be, and they are hereby instructed, so to arrange the expenditures from the said building fund that the amount paid out of it (exclusive of any balance that may remain, on the 19th of March next, unexpended of the sum of seventeen thousand dollars hereinbefore appropriated) shall not, at the close of any one year of the last four years of the building contract, exceed an average annual expenditure, throughout the said years, of fifty-two thousand dollars, to wit: at the end of one year an expenditure of fifty-two thousand dollars; at the end of two years an expenditure of a hundred and four thousand dollars, and so on.

Resolved, That all appropriations heretofore made by this board for the erection of the institution building, and the preparation of the institution campus, including appropriations made on the 28th of January last for fitting up and furnishing the building, and for lighting and heating the same, also for laying out and planting and fencing the campus, be and the same are hereby rescinded, and the sole appropriations for these objects are hereby declared to be those included in the preceding resolutions.

Resolved, That, for the present, the resolution of the board passed on the fourth December last, and authorizing an appropriation of twenty thousand dollars for the purchase of books, and which said appropriation is to commence from the 1st of January next, shall be strictly construed to authorize only the purchase of such valuable works of reference as the Secretary, or the Building or Executive Committee, may consider useful for present purposes, or otherwise likely to be immediately demanded in the prosecutions of the plan of the institution: *Provided, however*, That nothing in this nor in the preceding series of resolutions contained shall be construed to rescind, or in any way impair the force of, certain resolutions passed by the board on the 26th and 28th of January last, including the following: " *Resolved*, That for the purpose of carrying into effect the two principal modes of executing the act and trust pointed out in the resolutions herewith submitted, the permanent appropriations out of the accruing interest shall, so soon as the buildings are completed, be annually as follows—that is to say:

" First, for the formation of a library composed of valuable works pertaining to all departments of useful knowledge, and for the procuring, arranging, and preserving of the various collections of the institution, as well of natural history and objects of foreign and curious research, and of elegant art, as others, including salaries and all other general expenses connected with the same, excepting those of the first complete arrangement of all such collections and objects as now belong to the United States in the museum of the institution when completed, together with one-half of the salary of the Secretary, the sum of fifteen thousand dollars.

"Secondly, for the preparation and publication of transactions, reports, and all other publications of the institution, including appropriations for original researches and premiums for original papers, for the delivery of all lectures and payment of all lecturers, and for all general expenses connected with said lectures and publications, together with one-half of the salary of the Secretary, the remainder of the annually accruing interest, it being understood that all general and incidental expenses not specially connected with either of the above two great divisions of the plan of the institution shall be equally divided between them." And including also the following: "*Resolved*, That it is the opinion and intention of the board, that in the appropriation for the objects of the institution of any surplus of accrued interest which may remain after the completion of the buildings of the institution, an equal division shall be made between the two great branches; that is to say, one-half shall be appropriated to the library and museum fund, and the other half to the fund for original research, publications, and lectures; and that in regard to all other funds hereafter to accrue to the institution, the same division be made:" *And provided also*, That the present series of resolutions shall not be construed to rescind or impair the force of a certain other resolution of the 26th of January last, passed by the board, for the election of an Assistant Secretary, to act as librarian, and whose salary it was therein declared should commence "whenever the building is ready for the reception of the library." *And provided further*, That nothing in the present resolutions contained shall be construed to take from the Executive Committee the power heretofore, to wit: by resolution of the 26th January, granted to them, to make to the Assistant Secretary elect such compensation as they may deem reasonable for services he may render from time to time, in making catalogues or performing other similar duties for the institution.

Resolved, That there shall hereafter be one regular meeting of the Board of Regents, and no more, unless specially called according to the provisions of the act organizing the institution, and that said annual meeting be held on the first Wednesday in January of each year: *Provided*, That the regular annual meeting for the year eighteen hundred and forty-eight shall be held on the second Wednesday in December of that year.

No. 6.

Report of the Secretary of the Smithsonian Institution to the Board of Regents, December 8, 1847.

GENTLEMEN: A statement of the financial condition of the Smithsonian Institution, and of the progress made in the erection of the building, having been presented to your board by the committees charged with the care of these objects, it becomes my duty, as Secretary of the institution, to give an account of what has been done relative to the development of the plan of organization, and of the steps which have been taken in the way of carrying it into operation.

In accordance with my instructions, I consulted with men of eminence, in the different branches of literature and science, relative to the details of the plan of organization, and arranged the various suggestions offered, in the form of the accompanying programme. This, after having been submitted to a number of persons in whose knowledge and judgment I have confidence, is now presented to the board, with the concurrence of the Committee on Organization, for consideration and provisional adoption. I regret that my engagements have been such as to render it impossible for me to call upon many persons whose counsel would have been valuable, but I hope hereafter to avail myself of their advice in behalf of the institution. I also regret that I could not give the names of those whose suggestions have been adopted in the programme; the impossibility of rendering justice to all, has prevented my attempting this. Many of the suggestions have been offered by different persons, independently of each other; and, indeed, the general plan of the increase and diffusion of knowledge as adopted by the board, is such as would naturally arise in the mind of any person conversant with the history of physical science, and with the means usually employed for its extension and diffusion.

The introduction to the programme contains a series of propositions, suggested by a critical examination of the will of Smithson, to serve as a guide in judging of the fitness of any proposed plan for carrying out the design of the testator. The first section of the programme gives the details of the plan proposed for the increase and diffusion of knowledge by means of publication and original researches. The second section furnishes the details, so far as they can be made out at the present time, of the formation of a library, and a collection of objects of nature and art. These two plans combined, embrace the general propositions adopted by the Board of Regents at their last meeting, as the basis of future operations. It is intended in the proposed plan to harmonize the two modes of increasing and diffusing knowledge, and to give to the institution the widest influence compatible with its limited income. That all the propositions will meet with general approval cannot be expected; and that this organization is the best that could be devised is neither asserted nor believed. To produce *a priori* a plan of organization which shall be found to succeed perfectly in practice, and require no amendment, would be difficult under the most favorable circumstances, and becomes almost impossible where conflicting opinions are to be harmonized, and the definite requirements of the act establishing the institution are to be observed. It is not intended that the details of the organization, as given in the programme, should be permanently adopted without careful trial; they are rather presented as suggestions to be adopted provisionally, and to be carried into operation gradually and cautiously, with such changes, from time to time, as experience may dictate.

PROGRAMME OF ORGANIZATION OF THE SMITHSONIAN INSTITUTION.

[Presented to the Board of Regents December 8, 1847.]

INTRODUCTION.

General considerations which should serve as a guide in adopting a plan of organization.

1. WILL OF SMITHSON. The property is bequeathed to the United States of America, "to found at Washington, under the name of the Smithsonian Institution, an establishment for the increase and diffusion of knowledge among men."

2. The bequest is for the benefit of mankind. The government of the United States is merely a trustee to carry out the design of the testator.

3. The institution is not a national establishment, as is frequently supposed, but the establishment of an individual, and is to bear and perpetuate his name.

4. The objects of the institution are—1st, to increase, and 2d, to diffuse knowledge among men.

5. These two objects should not be confounded with one another. The first is to increase the existing stock of knowledge by the addition of new truths; and the second to disseminate knowledge, thus increased, among men.

6. The will makes no restriction in favor of any particular kind of knowledge; hence all branches are entitled to a share of attention.

7. Knowledge can be increased by different methods of facilitating and promoting the discovery of new truths, and can be most efficiently diffused among men by means of the press.

8. To effect the greatest amount of good, the organization should be such as to enable the institution to produce results in the way of increasing and diffusing knowledge, which cannot be produced by the existing institutions in our country.

9. The organization should also be such as can be adopted provisionally, can be easily reduced to practice, receive modifications, or be abandoned, in whole or in part, without a sacrifice of the funds.

10. In order to make up for the loss of time occasioned by the delay of eight years in establishing the institution, a considerable portion of the interest which has accrued should be added to the principal.

11. In proportion to the wide field of knowledge to be cultivated, the funds are small. Economy should therefore be consulted in the construction of the building; and not only should the first cost of the edifice be considered, but also the continual expense of keeping it in repair, and of the support of the establishment necessarily connected with it. There should also be but few individuals permanently supported by the institution.

12. The plan and dimensions of the building should be determined by the plan of the organization, and not the converse.

13. It should be recollected that mankind in general are to be benefited by the bequest, and that, therefore, all unnecessary expenditure on local objects would be a perversion of the trust.

14. Besides the foregoing considerations, deduced immediately from the will of Smithson, regard must be had to certain requirements of the act of Congress establishing the institution. These are a library, a museum, and a gallery of art, with a building on a liberal scale to contain them.

SECTION I.

Plan of organization of the institution, in accordance with the foregoing deductions from the will of Smithson.

To Increase Knowledge. It is proposed—

1. To stimulate men of talent to make original researches, by offering suitable rewards for memoirs containing new truths; and,

2. To appropriate annually a portion of the income for particular researches, under the direction of suitable persons.

To Diffuse Knowledge. It is proposed—

1. To publish a series of periodical reports on the progress of the different branches of knowledge; and,

2. To publish occasionally separate treatises on subjects of general interest.

DETAILS OF THE PLAN TO INCREASE KNOWLEDGE.

I. *By stimulating researches.*

1. Rewards, consisting of money, medals, &c., offered for original memoirs on all branches of knowledge.

2. The memoirs thus obtained to be published in a series of volumes, in a quarto form, and entitled "Smithsonian Contributions to Knowledge."

3. No memoir, on subjects of physical science, to be acccepted for publication, which does not furnish a positive addition to human knowledge resting on original research; and all unverified speculations to be rejected.

4. Each memoir presented to the institution to be submitted for examination to a commission of persons of reputation for learning in the branch to which the memoir pertains, and to be accepted for publication only in case the report of this commission is favorable.

5. The commission to be chosen by the officers of the institution, and the name of the author, as far as practicable, concealed, unless a favorable decision be made.

6. The volumes of the memoirs to be exchanged for the Transactions of literary and scientific societies, and copies to be given to all the colleges and principal libraries in this country. One part of the remaining copies may be offered for sale; and the other carefully preserved, to form complete sets of the volumes, to supply the demand from new institutions.

7. An abstract, or popular account, of the contents of these memoirs to be given to the public through the annual report of the Regents to Congress.

II. *By appropriating a portion of the income, annually, to special objects of research, under the direction of suitable persons.*

1. The objects, and the amount appropriated, to be recommended by counsellors of the institution.

2. Appropriations in different years to different objects; so that in course of time, each branch of knowledge may receive a share.

3. The results obtained from these appropriations to be published, with the memoirs before mentioned, in the volumes of the Smithsonian Contributions to Knowledge.

4. Examples of objects for which appropriations may be made.

(1.) System of extended meteorological observations, for solving the problem of American storms.

(2.) Explorations in descriptive natural history, and geological, magnetical, and topographical surveys, to collect materials for the formation of a Physical Atlas of the United States.

(3.) Solution of experimental problems, such as a new determination of the weight of the earth, of the velocity of electricity, and of light; chemical analyses of soils and plants; collection and publication of articles of science, accumulated in the offices of government.

(4.) Institution of statistical inquiries with reference to physical, moral, and political subjects.

(5.) Historical researches, and accurate surveys of places celebrated in American history.

(6.) Ethnological researches, particularly with reference to the different races of men in North America; also explorations and accurate surveys of the mounds and other remains of the ancient people of our country.

DETAILS OF THE PLAN FOR DIFFUSING KNOWLEDGE.

I. *By the publication of a series of reports, giving an account of the new discoveries in science, and of the changes made from year to year in all branches of knowledge not strictly professional.*

1. These reports will diffuse a kind of knowledge generally interesting, but which, at present, is inaccessible to the public. Some of the reports may be published annually, others at longer intervals, as the income of the institution, or the changes in the branches of knowledge, may indicate.
2. The reports are to be prepared by collaborators, eminent in the different branches of knowledge.
3. Each collaborator to be furnished with the journals and publications, domestic and foreign, necessary to the compilation of his report; to be paid a certain sum for his labors, and to be named on the title-page of the report.
4. The reports to be published in separate parts, so that persons interested in a particular branch can procure the parts relating to it, without purchasing the whole.
5. These reports may be presented to Congress, for partial distribution; the remaining copies to be given to literary and scientific institutions, and sold to individuals for a moderate price.

The following are some of the subjects which may be embraced in the reports.

I. PHYSICAL CLASS.

1. Physics, including astronomy, natural philosophy, chemistry, and meteorology.
2. Natural history, including botany, zoology, geology, &c.
3. Agriculture.
4. Application of science to arts.

II. MORAL AND POLITICAL CLASS.

5. Ethnology, including particular history, comparative philology, antiquities, &c.
6. Statistics and political economy.
7. Mental and moral philosophy.
8. A survey of the political events of the world ; penal reform, &c.

III. LITERATURE AND THE FINE ARTS.

9. Modern literature.
10. The fine arts, and their application to the useful arts.
11. Bibliography.
12. Obituary notices of distinguished individuals.

II. *By the publication of separate treatises on subjects of general interest.*

1. These treatises may occasionally consist of valuable memoirs, translated from foreign languages, or of articles prepared under the direction of the institution, or procured by offering premiums for the best exposition of a given subject.

2. The treatises should in all cases be submitted to a commission of competent judges previous to their publication.

3. As examples of these treatises, expositions may be obtained of the present state of the several branches of knowledge mentioned in the table of reports. Also of the following subjects, suggested by the Committee on Organization, viz: the statistics of labor, the productive arts of life, public instruction, &c.

SECTION II.

Plan of organization, in accordance with the terms of the resolutions of the Board of Regents, providing for the two modes of increasing and diffusing knowledge.

1. The act of Congress establishing the institution contemplated the formation of a library and a museum; and the Board of Regents, including these objects in the plan of organization, resolved to divide the income into two equal parts.

2. One part to be appropriated to increase and diffuse knowledge by means of publications and researches, agreeably to the scheme before given. The other part to be appropriated to the formation of a library and a collection of objects of nature and of art.

3. These two plans are not incompatible with one another.

4. To carry out the plan before described, a library will be required, consisting, 1st, of a complete collection of the transactions and proceedings of all the learned societies in the world; 2d, of the more important current periodical publications, and other works necessary in preparing the periodical reports.

5. The institution should make special collections, particularly of objects to verify its own publications.

6. Also a collection of instruments of research in all branches of experimental science.

7. With reference to the collection of books, other than those mentioned above, catalogues of all the different libraries in the United States should be procured, in order that the valuable books first purchased may be such as are not to be found in the United States.

8. Also catalogues of memoirs, and of books in foreign libraries, and other materials, should be collected for rendering the institution a centre of bibliographical knowledge, whence the student may be directed to any work which he may require.

9. It is believed that the collections in natural history will increase by donation, as rapidly as the income of the institution can make provision for their reception, and therefore it will seldom be necessary to purchase any articles of this kind.

10. Attempts should be made to procure for the gallery of arts casts of the most celebrated articles of ancient and modern sculpture.

11. The arts may be encouraged by providing a room, free of expense, for the exhibition of the objects of the Art-Union and other similar societies.

12. A small appropriation should annually be made for models of antiquities, such as those of the remains of ancient temples, &c.

13. For the present, or until the building is fully completed, besides the Secretary, no permanent assistant will be required, except one, to act as librarian.

14. The duty of the Secretary will be the general superintendence, with the advice of the Chancellor and other members of the establishment, of the literary and scientific operations of the institution; to give to the Regents annually an account of all the transactions; of the memoirs which have been received for publication; of the researches which have been made; and to edit, with the assistance of the librarian, the publications of the institution.

15. The duty of the Assistant Secretary, acting as librarian, will be, for the present, to assist in taking charge of the collections, to select and purchase, under the direction of the Secretary and a committee of the board, books and catalogues, and to procure the information before mentioned; to give information on plans of libraries, and to assist the Secretary in editing the publications of the institution and in the other duties of his office.

16. The Secretary and his assistants, during the session of Congress, will be required to illustrate new discoveries in science, and to exhibit new objects of art; also distinguished individuals should be invited to give lectures on subjects of general interest.

17. When the building is completed, and when, in accordance with the act of Congress, the charge of the National Museum is given to the Smithsonian Institution, other assistants will be required.

Explanations and illustrations of the programme.

Though the leading propositions of the programme have been fully discussed by the board, yet it will be important to offer some remarks in explanation and illustration of them in their present connexion.

That the institution is not a national establishment, in the sense in which institutions dependent on the government for support are so, must be evident when it is recollected that the money was not absolutely given to the United States, but intrusted to it for a special object, namely: the establishment of an institution for the benefit of men, to bear the name of the donor, and, consequently, to reflect upon his memory the honor of all the good which may be accomplished by means of the bequest. The operations of the Smithsonian Institution ought, therefore, to be mingled as little as possible with those of the government, and its funds should be applied exclusively and faithfully to the increase and diffusion of knowledge among men.

That the bequest is intended for the benefit of men in general, and that its influence ought not to be restricted to a single district, or even nation, may be inferred not only from the words of the will, but also from the character of Smithson himself; and I beg leave to quote, from a scrap of paper in his own hand, the following sentiment bearing on this point: "The man of science has no country; the world is his country—all men, his countrymen." The origin of the funds, the bequest of a foreigner, should also preclude the adoption of a plan which does not, in the words of Mr. Adams, "spread the benefits to be derived from the institution not only over the whole surface of this Union, but throughout the civilized world." "Mr. Smithson's reason for fixing the seat of his institution at Washington obviously was, that *there* is the seat of government of the United States, and *there* the Congress by whose legislation, and the Executive through whose agency, the trust committed to the honor, intelligence, and good faith of the nation, is to be fulfilled." The centre of operations being permanently fixed at Washington, the character of this city for literature and science will be the more highly exalted in proportion as the influence of the institution is more widely diffused.

That the terms *increase* and *diffusion* of knowledge are logically distinct, and should be literally interpreted with reference to the will, must be evident when we reflect that they are used in a definite sense, and not as mere synonymes, by all who are engaged in the pursuits to which Smithson devoted his life. In England there are two classes of institutions, founded on the two ideas conveyed by these terms. The Royal Society, the Astronomical, the Geological, the Statistical, the Antiquarian Societies, all have for their object the increase of knowledge; while the London Institution, the Mechanics' Institution, the Surry Institution, the Society for the Diffusion of Religious Knowledge, the Society for the Diffusion of Useful Knowledge, are all intended to diffuse or disseminate knowledge among men. In our own country, also, the same distinction is observed in the use of the terms by men of science. Our colleges, academies, and common schools, are recognised as institutions partially intended for the diffusion of knowledge, while the express object of some of our scientific societies is the promotion of the discovery of new truths.

The will makes no restriction in favor of any particular kind of knowledge; though propositions have been frequently made for devoting the funds exclusively to the promotion of certain branches of science having more immediate application to the practical arts of life, and the adoption of these propositions has been urged on the ground of the conformity of such objects to the pursuits of Smithson; but an examination of his writings will show that he excluded from his own studies no branch of general knowledge, and that he was fully impressed with the important philosophical fact, that all subjects of human thought relate to one great system of truth. To restrict, therefore, the operations of the institution to a single science or art, would do injustice to the character of the donor, as well as to the cause of general knowledge. If preference is to be given to any branches of research, it should be to the higher, and apparently more abstract; to the discovery of new principles, rather than of isolated facts. And this is true even in a practical point of view. Agriculture would have forever remained an empirical art, had it not been for the light shed upon it by the atomic theory of chemistry; and incomparably more is to be expected as to its future advancement from the perfection of the microscope, than from improvements in the ordinary instruments of husbandry.

The plan of increasing and diffusing knowledge, presented in the first section of the programme, will be found in strict accordance with the several propositions deduced from the will of Smithson, and given in the introduction. It embraces, as a leading feature, the design of interesting the greatest number of individuals in the operations of the institution, and of spreading its influence as widely as possible. It forms an active organization, exciting all to make original researches who are gifted with the necessary power, and diffusing a kind of knowledge, now only accessible to the few, among all those who are willing to receive it. In this country, though many excel in the application of science to the practical arts of life, few devote themselves to the continued labor and patient thought necessary to the discovery and development of new truths. The principal cause of this want of attention to original research, is the want, not of proper means, but of proper encouragement. The publication of original memoirs and periodical reports, as contemplated by the programme, will act as a powerful stimulus on the latent talent of our country, by placing in bold relief the real laborers in the field of original research, while it will afford the best materials for the use of those engaged in the diffusion of knowledge.

The advantages which will accrue from the plan of publishing the volumes of the Smithsonian Contributions to Knowledge, are various. In the first place, it will serve to render the name of the founder favorably known wherever literature and science are cultivated, and to keep it in continual remembrance with each succeeding volume, as long as knowledge is valued. A single new truth, first given to the world through these volumes, will forever stamp their character as a work of reference. The contributions will thus form the most befitting monument to perpetuate the name of one whose life was devoted to the increase of knowledge, and whose ruling passion, strong in death, prompted the noble bequest intended to facilitate the labors of others in the same pursuit.

Again, the publication of a series of volumes of original memoirs will afford to the institution the most ready means of entering into friendly relations and correspondence with all the learned societies in the world, and of enriching its library with their current transactions and proceedings. But perhaps the most important effect of the plan will be that of giving to the world many valuable memoirs, which, on account of the expense of the illustrations, could not be otherwise published. Every one who adds new and important truths to the existing stock of knowledge, must be of necessity, to a certain degree, in advance of his age. Hence the number of readers and purchasers of a work is generally in the inverse ratio of its intrinsic value; and consequently, authors of the highest rank of merit are frequently deterred from giving their productions to the world on account of the pecuniary loss to which the publication would subject them. When our lamented countryman, Bowditch, contemplated publishing his commentary on La Place, he assembled his family and informed them that the execution of this design would sacrifice one-third of his fortune, and that it was proper his heirs should be consulted on a subject which so nearly concerned them. The answer was worthy of the children of such a father: "We value," said they, "your reputation more than your money." Fortunately, in this instance, the means of making such a sacrifice existed; otherwise one of the proudest monuments of American science could not have been given to the world. In the majority of cases, however, those who are most capable of extending human knowledge are least able to incur the expense of the publication. Wilson, the American Ornithologist, states, in a letter to Michaux, that he has sacrificed everything to publish his work: "I have issued," he says, "six volumes, and am engaged on the seventh, but as yet I have not received a single cent of the proceeds." In an address on the subject of natural history, by one of our most active cultivators of this branch of knowledge, we find the following remarks, which are directly in point: "Few are acquainted with the fact that from the small number of scientific works sold, and the great expense of plates, our naturalists not only are not paid for their labors, but suffer pecuniary loss from their publications. Several works on different branches of zoology, now in the course of publication, will leave their authors losers by an aggregate of $15,000. I do not include in this estimate works already finished—one, for instance, the best contribution to the natural history of man extant, the publication of which will occasion its accomplished author a loss of several thousand dollars. A naturalist is extremely fortunate if he can dispose of 200 copies of an illustrated work, and the number of copies printed rarely exceeds 250." It may be said that these authors have their reward in the reputation which they thus purchase; but reputation should be the result of the talents and labor expended in the production of a work, and should not in the least depend upon the fact that the author is able to make a pecuniary sacrifice in giving the account of his discoveries to the public.

Besides the advantage to the author of having his memoir published in the Smithsonian Contributions free of expense, his labors will be given to the world with the stamp of approval of a commission of learned men; and his merits will be generally made known through the reports of the institution. Though the premiums offered may be small, yet they will have considerable effect in producing original articles. Fifty or a hundred dollars awarded to the author of an original paper, will, in many instances, suffice to supply the books, or to pay for the materials, or the manual labor required, in prosecuting the research.

There is one proposition of the programme which has given rise to much discussion, and which, therefore, requires particular explanation; I allude to that which excludes from the contributions all papers consisting merely of unverified speculations on subjects of physical science. The object of this proposition is to obviate the endless difficulties which would occur in rejecting papers of an unphilosophical character; and though it may in some cases exclude an interesting communication, yet the strict observance of it will be found of so much practical importance that it cannot be dispensed with. It has been supposed, from the adoption of this proposition, that we are disposed to undervalue abstract speculations: on the contrary, we know that all the advances in true science—namely, a knowledge of the laws of phenomena—are made by provisionally adopting well-conditioned hypotheses, the product of the imagination, and subsequently verifying them by an appeal to experiment and observation. Every new hypothesis of scientific value must not only furnish an exact explanation of known facts, but must also enable us to predict, in kind and quantity, the phenomena which will be exhibited under any given combination of circumstances. Thus, in the case of the undulatory hypothesis of light, it was inferred, as a logical consequence, that if the supposition were true that light consisted of waves of an ethereal medium, then two rays of light, like two waves of water under certain conditions, should annihilate each other, and darkness be produced. The experiment was tried, and the anticipated result was obtained. It is this exact agreement of the deduction with the actual result of experience that constitutes the verification of an hypothesis, and which alone entitles it to the name of a theory, and to a place in the Transactions of a scientific institution. It must be recollected that it is much easier to speculate than to investigate, and that very few of all the hypotheses imagined are capable of standing the test of scientific verification.

For the practical working of the plan for obtaining the character of a memoir, and the precaution taken before it is accepted for publication, I would refer to the correspondence, given in a subsequent part of this report, relative to the memoir now in process of publication by the institution. As it is not our intention to interfere with the proceedings of other institutions, but to co-operate with them, so far as our respective operations are compatible, communications may be referred to learned societies for inspection, as in the case of the above mentioned memoir, and abstracts of them given to the world through the bulletins of these societies, while the details of the memoirs and their expensive illustrations are published in the volumes of the Smithsonian Contributions. The officers of several learned societies in this country have expressed a willingness to co-operate in this way.

Since original research is the most direct way of increasing knowledge, it can scarcely be doubted that a part of the income of the bequest should be appropriated to this purpose, provided suitable persons can be found, and their labors be directed to proper objects. The number, however, of those who are capable of discovering scientific principles is comparatively small; like the poet, they are "born, not made," and, like him, must be left to choose their own subject, and wait the fitting time of inspiration. In case a person of this class has fallen on a vein of discovery, and is pursuing it with success, the better plan will be to grant him a small sum of money to carry on his investigations, provided they are considered worthy of assistance by competent judges. This will have the double effect of encouraging him in the pursuit, and of facilitating his progress. The institution, however, need not depend upon cases of this kind, even if they were more numerous than they are, for the application of its funds in the line of original research. There are large fields of observation and experiment, the cultivation of which, though it may afford no prospect of the discovery of a principle, can hardly fail to produce results of importance both in a practical and a theoretic point of view. As an illustration of this remark, I may mention the case of the investigations made a few years ago by committees of the Franklin Institute, of Philadelphia. The Secretary of the Treasury of the United States placed at the disposal of this society a sum of money, for the purpose of making experiments with reference to the cause of the explosion of steam-boilers. A committee of the society was chosen for this purpose, which adopted the ingenious plan of writing to all persons in the United States engaged in the application of steam, and particularly to those who had observed the explosion of a steam-boiler. In this way opinions and suggestions in great variety, as to the cause of explosions, were obtained. The most plausible of these were submitted to the test of experiment: the results obtained were highly important, and are to be found favorably mentioned in every systematic work on the subject of steam which has appeared, in any language, within the last few years. New and important facts were established; and, what was almost of as much consequence, errors which had usurped the place of truth were dethroned.

In the programme, examples are given of a few subjects of original research to which the attention of the institution may be turned. I will mention one in this place, which, in connexion with the contents of our first memoir, may deserve immediate attention. I allude to a small appropriation made annually for researches with reference to the remains of the ancient inhabitants of our country. This is a highly interesting field, and what is done in regard to it should be done quickly. Every year the progress of civilization is obliterating the ancient mounds, cities and villages are rising on the spots they have so long occupied undisturbed, and the distinctive marks of these remains are every year becoming less and less legible.

In carrying out the spirit of the plan adopted, namely, that of affecting men in general by the operations of the institution, it is evident that the principal means of diffusing knowledge must be the *press*. Though lectures should be given in the city in which Smithson has seen fit to direct the establishment of his institution, yet, as a plan of general diffusion of knowledge, the system of lectures would be entirely inadequate; every village in our extended country would have a right to demand a share of the benefit, and the income of the institution would be insufficient to supply a thousandth part of the demand. It is also evident that the knowledge diffused should, if possible, not only embrace all branches of general interest, so that each reader might find a subject suited to his taste, but also that it should differ in kind and quality from that which can be readily obtained through the cheap publications of the day. These requisites will be fully complied with in the publications of the series of reports proposed in the programme. A series of periodicals of this kind, posting up all the discoveries in science from time to time, and giving a well digested account of all the important changes in the different branches of knowledge, is a desideratum in the English language. The idea is borrowed from a partial plan of this kind in operation in Sweden and Germany; and for an example of what the work should be, I would refer to the annual report to the Swedish Academy of its perpetual Secretary, Berzelius, on physical science. The reports can be so prepared as to be highly interesting to the general reader, and at the same time of great importance to the exclusive cultivator of a particular branch of knowledge. Full references should be given, in foot-notes, to the page, number, or volume of the work from which the information was obtained, and where a more detailed account can be found. It is scarcely necessary to remark, that the preparation of these reports should be intrusted only to persons profoundly acquainted with the subjects to which they relate—namely, to those who are devoted to particular branches, while they possess a knowledge of general principles. Sufficient explanations should be introduced to render the report intelligible to the general reader, without destroying its scientific character. Occasionally reports may be obtained from abroad—as, for example, accounts of the progress of certain branches of knowledge in foreign countries—and these may be translated, if necessary, and incorporated into other reports, by some competent person in this country.

Besides the reports on the progress of knowledge, the programme proposes to publish occasionally brief treatises on particular subjects. There are always subjects of general interest, of which brief expositions would be of much value. The preparation of these, however, should be intrusted to none but persons of character and reputation, and should be subjected to a revision by competent and responsible judges before they are given to the public. They may be presented in the form of reports on the existing state of knowledge relative to a given subject, and may sometimes consist of memoirs and expositions of particular branches of literature and science, translated from foreign languages. The reports and treatises of the institution, sold at a price barely sufficient to pay the expense of printing, will find their way into every school in our country, and will be used not as first lessons for the pupil, but as sources of reliable information for the teacher.

The second section of the programme gives, so far as they have been made out, the details of the part of the plan of organization directed by the act of Congress establishing the institution. The two plans, namely, that of publication and original research, and that of collections of objects of nature and art, are not incompatible, and may be carried on harmoniously with each other. The only effect which they will have on one another is that of limiting the operation of each, on account of the funds given to the other. Still, with a judicious application, and an economical expenditure of the income, and particularly by rigidly observing the plan of finance, suggested by Dr. Bache, in the construction of the building, much good may be effected in each of the two branches of the institution. To carry on the operations of the first, a working library will be required, consisting of the past volumes of the transactions and proceedings of all the learned societies in every language. These are the original sources from which the most important principles of the positive knowledge of our day have been drawn. We shall also require a collection of the most important current literature and science for the use of the collaborators of the reports; most of these, however, will be procured in exchange for the publications of the institution, and therefore will draw but little from the library fund. For other suggestions relative to the details of the library, I would refer you to the annexed communication from Professor Jewett, Assistant Secretary, acting as librarian. (See appendix No. 1.)

The collections of the institution, as far as possible, should consist of such articles as are not elsewhere to be found in this country, so that the visitors at Washington may see new objects, and the spirit of the plan be kept up, of interesting the greatest possible number of individuals. A perfect collection of all objects of nature and of art, if such could be obtained and deposited in one place, would form a museum of the highest interest; but the portion of the income of the bequest which can be devoted to the increase and maintenance of the museum, will be too small to warrant any attempt towards an indiscriminate collection. It is hoped that in due time other means may be found of establishing and supporting a general collection of objects of nature and art at the seat of the general government, with funds not derived from the Smithsonian bequest. For the present, it should be the object of the institution to confine the application of the funds, first, to such collections as will tend to facilitate the study of the memoirs which may be published in the Contributions, and to establish their correctness; secondly, to the purchase of such objects as are not generally known in this country, in the way of art, and the illustration of antiquities, such as models of buildings, &c.; and, thirdly, to the formation of a collection of instruments of physical research, which will be required both in the illustration of new physical truths, and in the scientific investigations undertaken by the institution.

Much popular interest may be awakened in favor of the institution at Washington, by throwing the rooms of the building open, on stated evenings during the session of Congress, for literary and scientific assemblies, after the manner of the weekly meetings of the Royal Institution in London. At these meetings, without the formality of a regular lecture, new truths in science may be illustrated, and new objects of art exhibited. Besides these, courses of lectures may be given on particular subjects by the officers of the institution, or by distinguished individuals invited for the purpose.

Commencement of the operations of the institution.

I was authorized, in connexion with the Committee on Organization, to commence the publication of the Smithsonian Contributions to Knowledge, and to receive any memoir which might be presented on any subject, provided it was found, on examination, to furnish an interesting addition to the sum of human knowledge, resting on original research. The first memoir presented, and found to be of the character prescribed by the resolution of the board, was one on the remains of the ancient inhabitants of the North American continent. It contains the result of several years' labor in the survey and exploration of the mounds and earthworks of the Mississippi valley, and will furnish a highly interesting addition to the antiquities of our country, which could not have been given to the world, but for the timely aid extended to it by this institution. The memoir was referred to the American Ethnological Society, with a request that a committee of its members might be appointed to examine and report on its character, as to fitness for publication in the Smithsonian Contributions to Knowledge. On the favorable report of this committee, and on the responsibility of the society, the memoir has been accepted for publication. The following correspondence will serve to give an account of the work, and to illustrate the manner in which it is proposed to submit the papers which may be presented for publication to a commission of competent judges.

CORRESPONDENCE RELATIVE TO THE ACCEPTANCE FOR PUBLICATION OF THE ETHNOLOGICAL MEMOIR OF MESSRS. SQUIER AND DAVIS.

From Messrs. Squier and Davis to the Secretary of the Smithsonian Institution.

CHILLICOTHE, O., *May* 15, 1847.

DEAR SIR: It is proposed in the recognised plan of organization of the Smithsonian Institution, of which you are the executive officer, to publish, under the title of "*Smithsonian Contributions to Knowledge*," such original papers and memoirs "as shall constitute valuable additions to the sum of human knowledge." Under the belief that it falls legitimately within the scope of the above plan, the undersigned herewith submit for acceptance and publication, subject to the prescribed rules of the institution, a MS. memoir, entitled "ANCIENT MONUMENTS OF THE MISSISSIPPI VALLEY, *comprising the results of Extensive Original Surveys and Explorations:* by E. G. SQUIER and E. H. DAVIS." The extent of these investigations, and their general character, are sufficiently indicated in the prefatory remarks to the volume.

With high consideration, we are truly yours,

E. GEO. SQUIER.
E. H. DAVIS.

JOSEPH HENRY, Esq.,
Secretary Smithsonian Institution.

From the Secretary of the Smithsonian Institution to the President of the American Ethnological Society.

WASHINGTON, *June* 2, 1847.

DEAR SIR: I am authorized by the Regents of the Smithsonian Institution to publish, in the numbers of the "*Smithsonian Contributions to Knowledge*," any memoir which may be presented for this purpose, provided that, on careful examination by a commission of competent judges, the memoir shall be found to furnish a new and interesting addition to knowledge, resting on original research. The accompanying memoir, entitled "*Ancient Monuments of the Mississippi Valley*," *&c.*, having been presented for publication, I beg leave to refer the same, through you, to the American Ethnological Society, with the request that a committee of the members may be appointed to examine and report on its character, in reference to the particulars above mentioned. If the report of the committee be favorable, the memoir will be accepted for publication; full confidence being placed in the ability of the committee to judge o the character of the article, and in their caution in making up their opinion.

I have the honor to be, very respectfully, your obedient servant,

JOSEPH HENRY,
Secretary Smithsonian Institution.

Hon. ALBERT GALLATIN,
President American Ethnological Society.

Extract of a letter from the President of the American Ethnological Society to the Secretary of the Smithsonian Institution.

"New York, *June* 12, 1847.

"Dear Sir: I have the honor to enclose a copy of the proceedings and resolutions of the New York Ethnological Society upon the MS. work on American Antiquities, by Messrs. E. G. Squier and E. H. Davis, submitted with your letter of the 2d inst.

"I approve entirely of the resolutions and recommendations of the society.

* * * * * * * * *

"Whatever may be the intrinsic value of the remains of former times which are found in the United States, it is necessary that they should at least be correctly described, and that existing gross errors should be corrected; and I repeat my conviction that, though ardent, Messrs. Squier and Davis are animated by that thorough love of truth which renders their researches worthy of entire confidence.

* * * * * * * * *

"I have the honor to be, &c.,

"ALBERT GALLATIN.

"Prof. J. Henry,
"*Secretary of Smithsonian Institution.*"

At a regular meeting of the American Ethnological Society, held at the house of the Hon. Albert Gallatin, on the evening of the 4th of June, the president laid before the members a communication from Professor J Henry, Secretary of the Smithsonian Institution, transmitting, for the examination and opinion of the society, a MS. work on the Ancient Aboriginal Monuments of the United States. On motion, the letter and accompanying MS. were referred to a committee consisting of Edward Robinson, D. D., John R. Bartlett, Professor W. W. Turner, Samuel G. Morton, M. D., and Hon. George P. Marsh, to report upon the same. At a subsequent meeting of the society, this committee submitted the following report and resolutions, which were unanimously accepted and adopted:

REPORT.

The committee of the American Ethnological Society, to which was referred the communication of the Secretary of the Smithsonian Institution, transmitting a manuscript work, entitled "Ancient Monuments of the Mississippi Valley, *comprising the results of Extensive Original Surveys and Explorations,*" by E. G. Squier and E. H. Davis, beg leave to report, that

They have examined the work in question, and regard it not only as a new and interesting, but as an eminently valuable addition to our stock of knowledge on a subject little understood, but in which is felt a deep and constantly increasing interest, both in our country and abroad. In their judgment, the work is worthy of the subject, and highly creditable to the authors. Its chief features are, a scientific arrangement, simplicity, and directness of statement, and legitimate deduction from facts, while there is no attempt at mere speculation or theory. If published, it will be an enduring monument to connect the names of the investigators in honorable and lasting remembrance with the great subject of American Archæology.

The existence and progress of these investigations were made known to the society by correspondence early in the year 1846; and in June of that year specimens of the relics recovered, accompanied by numerous maps and plans of ancient earthworks and sectional views of the mounds from which the remains were taken, were laid before the society by Mr. Squier in person. These excited deep interest and surprise in all who saw them; and the society immediately took measures to encourage further investigation, and secure the publication, under its own auspices, of the important results already obtained. A few months later, the chairman of the present committee, being in Ohio, was enabled, through the kindness of Messrs. Squier and Davis, to visit several of the more important monuments in the immediate vicinity of Chillicothe, and, among these, "Mound City," so called, from which very many of the minor relics and specimens were procured. He was struck with the accuracy of the plans and drawings, as well as of the accounts which had been laid before the society, and bears full testimony to the fidelity and integrity with which the process of investigation and delineation has been conducted.

During the last and present season the researches of these gentlemen have been actively prosecuted and widely extended, and the above work, largely illustrated, comprising the results, has been prepared. These results are so numerous and important, and consequently such is the extent and magnitude of the work itself, as to put its publication beyond any means which the society can command. Under these circumstances, your committee learn with pleasure that preliminary arrangements have been made for its publication by the Smithsonian Institution, among its "Contributions to Knowledge." It can only be a matter of sincere gratification to this society to see that which it cannot itself accomplish for the history and antiquities of our country, taken up and carried out under such favorable auspices; and they cannot but rejoice that an opportunity is thus afforded to that noble institution of opening its high career by fostering scientific researches into the interesting problems connected with the Ante-Columbian history and Aboriginal monuments of our own country.

In view of these facts, your committee would recommend the adoption of the following resolutions by the society:

Resolved, That this society regard the researches of Messrs. Squier and Davis as of very great importance in American Archæology, and as casting much light upon our aboriginal antiquities, especially upon the character and habits of the earliest races which had their seat in the Mississippi valley.

Resolved, That we regard the work prepared upon this subject as one of great general interest, and as worthy to be adopted for publication by the Smithsonian Institution, both as resting on original researches, and as affording remarkable illustrations of the history of the American continent.

Your committee would also append to this report the accompanying letters from Samuel G. Morton, M. D., of Philadelphia, and Hon. George P. Marsh, of Vermont, both members of this society, and joint members of this committee.

All of which is respectfully submitted.

EDWARD ROBINSON, }
JOHN R. BARTLETT, } *Committee.*
W. W. TURNER, }

New York, *June*, 1847.

New York, *June* 9, 1847.

I have examined with much interest and attention the manuscripts, drawings, and ancient relics in the possession of Mr. E. G. Squier, and am happy to say that my previous impressions concerning the value of the researches of that gentleman and his associate are fully confirmed. It is fortunate for the cause of American Archæology that the first systematic attempt at its elucidation should have been conceived and executed in so truly philosophical a spirit; and rich as this age already is in antiquarian lore, it has, I think, received few more important contributions than that which the enlightened and generous zeal of these two private gentlemen is about to confer upon it. The Smithsonian collections could not begin with a more appropriate or creditable essay; and I hope that every facility may be afforded to the authors in bringing before the public the results of their honorable labors in as suitable a form and with as little delay as possible.

GEO. P. MARSH.

PHILADELPHIA, *June* 8, 1847.

As a member of the committee of the American Ethnological Society, appointed to report on the memoir on American Archæology, by Messrs. E. G. SQUIER and E. H. DAVIS, I have great pleasure in saying that after a careful and repeated inspection of the materials in the hands of those gentlemen, I am convinced they constitute by far the most important contribution to the Archæology of the United States that has ever been offered to the public. The number and accuracy of their plans, sketches, &c., have both interested and surprised me, and it is gratifying to learn that the preliminary arrangements have been made for their publication under the honorable auspices of the Smithsonian Institution.

SAML. GEORGE MORTON.

The memoirs of Messrs. Squier and Davis will occupy the greater portion, if not the whole, of the first volume of the Contributions. The illustrations will consist of fifty-five quarto plates of the mounds, earthworks, and maps of the adjacent country; also, of about two hundred wood-cuts, principally delineations of the various articles found in the mounds. Those who consider no branch of knowledge of any value but such as relates to the immediate gratification of our physical wants, have objected to the acceptance of this memoir as one of the first publications of the institution; but it must be recollected that the will of Smithson makes no restriction in favor of any particular kind of knowledge, and that each branch is, therefore, entitled to a share of his bequest. The Ethnological memoir of Messrs. Squier and Davis was the first, of the proper character, presented for publication, and hence it was entitled to the first place in the series of Smithsonian Contributions. Besides this, it furnishes an addition to a branch of knowledge which is at this time occupying the attention of a large class of minds, and which cannot fail to be interesting to every intelligent person who would learn something of the changes to which man has been subjected.

One of the volumes of the Contributions will contain a sketch of the life of Smithson, by the Chancellor. The materials for this have been collected from the several volumes of the Transactions of the Royal Society, and the scientific journals of the beginning of the present, and the latter part of the last century. The first volume will be published as soon as the wood-cuts and plates, now in the course of preparation, are finished.

Besides the memoirs before mentioned, a number of others have been presented, some of which, though apparently of interest, and the product of thought and labor, were not of the character required by the resolution of the board, and these have either been returned to the authors, or are in the possession of the Secretary. A number of others have also been provisionally adopted, or are in the course of preparation. Some of these are on the most abstruse parts of physical science, and all will do honor to the intellectual character of our country. Though the number of original memoirs which will be found worthy of a place in the Contributions will probably not be large, yet it will, perhaps, be best to set apart a definite portion of the income of the bequest—as, for example, at present three or four thousand dollars annually—to defray the expense of this part of the plan of increasing knowledge. A considerable portion, however, of the sum thus expended will be returned to the institution in the form of additions to its library. I may also suggest, in this place, the propriety of the adoption, by the board, of a resolution inviting all engaged in original research to send the results of their labors for publication in the Smithsonian Contributions.

The board also directed me to commence the collection of apparatus, and I accordingly sent orders to Europe, to the amount of twelve hundred dollars, for the purchase of such articles as could not be procured in the United States. Most of the instruments have been received, and will be found of importance, not only in the way of original research, but also in illustrating some of the most interesting and recent phenomena of physical science, as well as serving as samples for imitation to the artists of this country. It was thought that these articles would be admitted free of duty, and a petition to this effect was presented to the Secretary of the Treasury; but, though this officer is well known to be much interested in the prosperity of the institution, such is the nature of the law that the duty could not be remitted.

There is an article of apparatus which, within a few years past, has opened almost a new world of research in the phenomena of life and organization, the use of which is now indispensable in advancing our knowledge of physiology and its kindred branches of science. I allude to the achromatic microscope, to increase the power of which, the artists of Germany, France, and England have vied with each other. On account of the small number of persons who are capable of constructing the proper lenses, the best specimens of this instrument are very scarce in this country, and can be procured only at a great expense. Under these circumstances, it was a matter of much interest to learn, from a source which could be relied upon, that an individual in the interior of the State of New York had successfully devoted himself to the study of the microscope, and that he was able to produce instruments of this kind which would compete with the best of those constructed in Europe. In order to do justice to the talents and labors of this person, as well as to furnish the institution with a valuable instrument of research, I requested him to construct a microscope, to be paid for out of the funds for the purchase of apparatus, provided that a commission, appointed by myself, should find it capable of producing certain effects. This proposition was accepted, and the result will probably be given to the board at the next meeting.

Preparations have also been made for instituting various lines of physical research. Among the subjects mentioned in the programme as an example for the application of the funds of the institution, is terrestrial magnetism. I need scarcely say that this is a subject not only of high interest in a theoretical point of view, but also in its direct reference to navigation and the various geodetical operations of civil and military life. A resolution of Congress, authorizing the exploration of the mineral lands adjacent to the great lakes, has given to us the means of advancing this branch of knowledge with but little expenditure of the funds of the institution. The Secretary of the Treasury readily agreed to the proposition that there should be added to the mineralogical and geological surveys of these regions, determinations of the dip, the variation, and the intensity of the magnetic forces, provided that the Smithsonian Institution would furnish one set of the instruments, and take charge of the direction of the observations, and of reducing and publishing them. In the survey of the mineral lands in the vicinity of lake Michigan under Dr. Jackson, Dr. Locke, of Cincinnati, has been employed with his own apparatus; and to supply the necessary instruments for the survey in Wisconsin, preliminary steps have been taken to procure other instruments from London.

Another subject of research mentioned in the programme, and which has been urged upon the immediate attention of the institution, is that of an extensive system of meteorological observations, particularly with reference to the phenomena of American storms. Of late years, in our country, more additions have been made to meteorology than to any other branch of physical science. Several important generalizations have been arrived at, and definite theories proposed, which now enable us to direct our attention, with scientific precision, to such points of observation as cannot fail to reward us with new and interesting results. It is proposed to organize a system of observations which shall extend as far as possible over the North American continent; and in order to this, it will be necessary to engage the co-operation of the British government. I have accordingly addressed a letter on this subject to Lieutenant Colonel Sabine, corresponding secretary of the Royal Society, who assures me that, as soon as the plan is fully matured for this country, there will be no difficulty in establishing a system of corresponding observations in the British provinces. I have also addressed letters to several gentlemen distinguished for their attainments in meteorology, asking for suggestions as to the plan of observation; and I beg leave to refer the board to the accompanying report of Prof. Loomis, of New York University, and also to the communication of Prof. Espy, received in answer. (Appendix Nos. 2 and 3.) The former contains an exposition of the advantages which may be derived from the study of meteorology, and what has been done in this branch of science in this country, and what encouragement there is for the further prosecution of the same subject, together with a general plan of operations. The present time appears to be peculiarly auspicious for commencing an enterprise of the proposed kind. The citizens of the United States are now scattered over every part of the southern and western portion of North America, and the extended lines of telegraph will furnish a ready means of warning the more northern and eastern observers to be on the watch for the first appearance of an advancing storm.

All which is respectfully submitted.

JOSEPH HENRY,
Secretary.

To the Regents *of the Smithsonian Institution.*

APPENDIX No. 1.

Extract from a communication of Professor Jewett, Assistant Secretary of the institution, acting as librarian.

My dear sir: As I do not expect to have the pleasure of seeing you again before the meeting of the Regents, I will, with your indulgence, refer to some of the principal matters which will require attention in commencing the library. They would no doubt all occur to you in their order, but I have thought you might find it convenient to have this part of the business in some degree prepared to your hands. A great deal of preparatory work is to be gone through with, before any books can be placed on the shelves.

1. On the plan proposed for the library, it seems to me that the first thing to be done is to make arrangements for obtaining catalogues, printed or in manuscript, of the principal libraries of the United States; to examine these libraries, as far as can be done personally, in order to know their general character, the statistics of their increase, &c.; and to form such alliances with the librarians as will be indispensable in making the library of the institution, in conformity with the suggestion of Dr. Bache, a supplemental one, and a centre of bibliographical reference. Some libraries possess printed catalogues complete nearly down to the present time; others are several years behindhand. It will be necessary to procure manuscript catalogues in continuation of those which have been printed, and to make arrangements for receiving, from month to month, or from year to year, lists of all future accessions. These supplementary catalogues should all be prepared on a uniform plan. The titles should be written on cards of the same size, so that they may be placed together in one alphabetical arrangement, in order to facilitate research. A mark placed on the back of each card will designate the library from which it came. Now, in every library with which we are in correspondence some one must be employed to do this. It would be merely clerk's labor, where the catalogues are properly kept, and no doubt the librarian or assistant might in every case be induced to undertake it for a small compensation.

2. The next thing to be done will be to make arrangements for procuring the books to which we are entitled by the 10th section of the charter of the institution. Unless something be done, this provision, in course of time, will bring in comparatively few books in a year. I have no doubt that publishers generally would readily send their books, if the subject were properly presented to them, and arrangements made by which they could transmit them to Washington without subjecting the institution or themselves to expenses altogether disproportioned to the value of the books. It has occurred to me that perhaps the several district clerks might be induced to attend to the business: it is perhaps legally their duty to do so, but I suppose it would be unsafe to rely upon their performing faithfully such an unexpected duty, unless they received for it some additional compensation. Besides this, a circular might be printed and sent to publishers, setting forth the advantages which would result directly to the cause of letters, and indirectly to themselves, from compliance with this requirement. By these means I think we should obtain nearly all the publications of importance issued from the American press.

3. The selection of books for the first purchase must be made. This will, I suppose, comprise three classes of works: 1. Those which may be immediately needed in the scientific department; 2. Bibliographical works and descriptions, histories and catalogues of similar institutions; and, 3. The general collection, consisting of the memoirs, transactions, and journals of the learned societies of Europe and America. These three classes of books will form a library quite unique, and one of great utility. The catalogue, if it be made with fulness and accuracy, will be a valuable publication. I think, further, that a somewhat extended list of books should be made out for future purchases. These lists should be intrusted to honest and faithful men in some of the principal book marts in Europe, with orders to buy the books whenever they can find them—at say one-half *the ordinary prices*. In this way we should obtain at very low prices great numbers of the books which we shall want. Of course, the same list should not be left with different men. The work should be done with care, and by consultation with the best scholars in the country. It will be difficult to find the necessary bibliographical *helps*. The best collection of them in the country is in the library of the Brown University, but this is very imperfect.

4. The first *purchases* are to be made, and the arrangements for future purchases. These, of course, should not be commenced until the lists are as far completed as they can judiciously be in this country.

5. Another subject contemplated in the programme of organization, and which should receive immediate attention, is the procuring of copies of some of the most celebrated *works of art*. It will probably be best to confine the purchases at first principally to plaster casts of some of the finest specimens of ancient and modern statuary. These can be procured very cheap, and convey, of course, a perfect representation of the original. I have no doubt that for a public institution, and one under national auspices, we could, whenever we desire it, obtain permission to take casts directly from the statues.

The expense of doing so would of course be somewhat greater than that of purchasing such copies as might be found in the market, but a small difference in expense is not to be thought of in such a case. It would further be desirable to commence the purchase of the models of antiquities, such as models in cork of some of the houses, temples, theatres, baths, &c., &c., in Pompeii and Herculaneum. These can be procured at comparatively small prices. Models of every interesting part of Pompeii which has been excavated, presenting in miniature a perfect view of nearly the whole on the scale of 1 foot to 150, might be procured for about $2,000. It might also be well to procure a few Etruscan vases; also a few antique coins and medals, sufficient to convey some illustration of numismatics, as a subsidiary branch of history. The Regents should of course decide what proportion of the appropriation for collections should each year be expended for these purposes. I will merely remark that $1,000, or even $500 at the outset, prudently expended, would procure a very interesting collection.

I have thus stated quite in detail the work which must be done before the library can be ready for use, or rather before any part of it can be placed upon the shelves. Before it can be ready for use, much more is to be done in arranging and cataloguing. To lay properly the foundation of a large library is a slow work, and much time must necessarily be consumed in producing but small visible results.

I am, my dear sir, very truly, your friend and servant,

C. C. JEWETT.

PROFESSOR HENRY, LL. D.,
Secretary Smithsonian Institution.

APPENDIX No. 2.

Report on the Meteorology of the United States: By Professor LOOMIS *Submitted to the Secretary of the Smithsonian Institution.*

MY DEAR SIR: Believing that the science of meteorology has now arrived at that stage of advancement in which a more powerful combination of observers is needed to secure any rapid progress, I fully concur in the importance of establishing an extended system of observations under the direction of the Smithsonian Institution, and propose in this report briefly to inquire,

I. What advantages society may expect to derive from the study of meteorology, particularly that branch of it which relates to the phenomena of storms.

II. What has already been done in this country, 1st, towards making the necessary observations; and, 2d, towards deducing from the observations general laws.

III. What encouragement there is to a further prosecution of the same researches; and,

IV. I shall offer a plan for securing these advantages in their fullest extent.

I. Of what importance to society is the study of meteorology?

Very little argument is needed to prove that our comfort and convenience, and not unfrequently our lives and property, are dependent upon meteorological phenomena. This is proverbially true of the mariner. The moment he embarks upon the treacherous sea, he finds himself at the mercy of the winds. His life often depends upon the fidelity with which he watches every change in the aspect of the sky. In a single hour he may exchange the deceptive calm for the fatal tornado. The number of disasters upon the sea is frightful, and is far greater than is generally known. In the gale of December 15, 1839, 89 vessels were wrecked on the Massachusetts coast; and of these, 61 on a single cape. In the great hurricane of 1780, 13 battle-ships were lost, and 16 more dismasted. England and America alone suffer an annual loss from wrecks of more than 1,000 vessels, and nearly one-half of this is on the American coast.

But how can the study of meteorology benefit the sailor? Will it enable him to calm the tempest—to subdue the raging of the sea? This we do not expect; yet, if he can anticipate the approach of a storm even by a few hours, he may generally place himself beyond the reach of its fury. Is it in the power of science to enable the navigator to anticipate the coming tempest? If so, then it would be difficult to name a subject of more vital importance to our commerce. How far this object has been already attained, and what encouragement there is to expect further discoveries, I shall consider hereafter.

The sailor is not the only person who has an interest in the study of meteorology. Although but a small part of the population of the United States are directly engaged in foreign commerce, yet so important has this department of industry become, and so interwoven with all the business of the country, that there is not a trade or profession which does not feel the shock of any great disaster at sea. Aside from this indirect interest, the farmer is directly dependent upon the weather for the consummation of his plans, almost equally with the sailor. Severe drought or excessive rains, untimely frost or a scorching sun, may blast all the hopes of the husbandman. Here it may be asked, do you expect to produce rain or sunshine at pleasure? Probably not. But if we can anticipate the general character of a season, the farmer may regulate his time of planting or the nature of his crops, so as to be least injuriously affected by unpropitious weather; so that, if we cannot strip the lightning of its power, we may at least direct it harmlessly to the earth.

Again, an extensive series of meteorological observations may prove of immense importance to the scientific physician. It cannot be doubted that the salubrity of a climate is to a great extent dependent upon its meteorology—on its mean temperature, the range of the thermometer, the suddenness of its changes, the moisture of the air, excessive rains or unusual droughts, &c. To trace the connexion between these causes and prevalent diseases, requires an accumulation of precise meteorological observations made in every variety of exposure, and continued for a long period of time. That it is possible to discover such a connexion, if it really exist, cannot admit of a reasonable doubt; nor is it difficult to anticipate the important consequences which must flow from it. To discover the cause of disease is the first step towards a cure; and it is by no means chimerical to suppose that a complete system of meteorological observations throughout the United States might be the means of extending the duration of human life.

It cannot, then, be questioned that meteorology is a subject of the greatest practical importance, *provided* it has any solid foundation for a science. If the laws of storms can be discovered, this knowledge must be of the highest importance to mankind, particularly to those who are employed in navigating the sea. If the prevalent character of a season can be anticipated, it would save the husbandman much bitter disappointment from the failure of his crops. If the influence of climate upon disease could be detected, it might add years to the mean duration of human life. What encouragement there may be to anticipate that these results will ever be attained, I shall consider after inquiring—

II. What has already been done for the promotion of meteorology,

1, In the way of making the necessary observations.

Previous to the year 1819, no combined systematic effort had been made in this country for the promotion of meteorology. Registers had been industriously kept by various private individuals, but they were without any concerted action. In 1819, under the direction of the then Secretary of War, John C. Calhoun, a system of meteorological observations was commenced at the different military posts, which has been continued to the present time. This was a highly important movement, and was prompted by a most liberal spirit. It has furnished us with an approximate knowledge of the mean temperature of a considerable number of stations, many of them remote from the more populous parts of the United States. It should, however, be remembered that the instruments provided never exceeded a thermometer and a rain-gauge; and the observations, therefore, had of necessity a limited range.

In 1825, a similar system of observations was introduced into the State of New York, almost without modification. Each of the academies incorporated by the Board of Regents was furnished with a thermometer and a rain-gauge, and was required to keep a register, after a prescribed form, in order to be entitled to a portion of the public literary fund. This system has now continued for more than twenty years, and the number of academies reporting has increased from ten to forty. The plan was highly creditable to the public spirit and scientific taste of New York. It was a movement in advance of public sentiment in the other States, and the observations were, perhaps, as extensive as it was expedient to undertake at that time. These observations have determined, with considerable accuracy, the mean temperature of the State; and the annual report contains a vast amount of important meteorological statistics.

More recently, Pennsylvania has set an example of the same kind to her sister States. In 1837 the legislature of that State appropriated $4,000 for the advancement of meteorology; and out of this sum, which was placed at the disposal of a joint committee of the American Philosophical Society and Franklin Institute, a barometer, two common thermometers, a self-registering thermometer, and a rain-gauge, were purchased for each county in the State, to be placed in the hands of some skilful observer who should volunteer to keep a journal of the weather, according to a common form prescribed by the committee. The observations were commenced with little delay, and have been regularly continued. Here are made observations of the barometer and thermometer three times a day; of the self-registering thermometer; the winds estimated for sixteen points of the compass; the depth of rain; and, at some stations, observations of the dew-point.

In the year 1843, the system of observations at the military posts was reorganized upon a scale more in accordance with the claims of science. They now comprise observations of the barometer, attached and external thermometer, wet-bulb thermometer; direction and force of the wind; direction, velocity, and amount of clouds; each at four hours of the day, viz: sunrise, 9 a. m., 3 and 9 p. m.; together with the amount of rain, and the times of its beginning and ending.

Thus it appears we have observations from the general government at about sixty posts, stretching along the entire Atlantic coast, the gulf of Mexico, the Indian territory beyond the Mississippi, and the chain of the northern lakes. Next come the observations of two large States, New York and Pennsylvania. And then we have amateur observers, pretty numerous in New England—scattered more sparingly over the south and west.

I now come to the inquiry, what progress has been made,

2, Towards deducing from these observations general laws.

In the list of philosophers who have contributed to create science out of the crude materials furnished by observation, I shall first mention Mr. Redfield. His first paper on the storms of the Atlantic coast appeared in April, 1831, in volume 20 of the American Journal of Science. This paper gives a full account of the hurricane of September, 1821, which was traced from the West India islands northward along the whole line of our coast. It contained also a notice of the storm of August 17, 1830, and two or three other storms of the same year. From a comparison of all the observations, Mr. Redfield derived the conclusion that those storms were great whirlwinds. In 1833 he published the following general propositions, as embodying the results of his investigations:

1. The severe storms of the Atlantic coast often originate in the tropical latitudes, where they are distinguished by the name of *hurricanes*.

2. These storms cover, at the same moment of time, a surface whose diameter varies from one to five hundred miles, and in some cases they have been much more extensive. They act with diminished violence towards the exterior, and with increased energy towards the interior.

3. While south of the parallel of 30° these storms pursue their course towards the west, on a track which inclines gradually to the northward. In the vicinity of latitude 30° their course changes somewhat abruptly to the northward and eastward, and the track continues to incline gradually to the east, towards which point, after leaving the lower latitudes, they advance with an accelerated velocity. The rate of progress may be estimated at from 12 to 30 miles an hour.

4. The duration of the storm at any place within its track depends upon its extent, and the rate of velocity with which it moves.

5. The direction of the wind over the greater portion of the track is not the direction of the progress of the storm.

6. In the lower latitudes, while drifting to the westward, the direction of the wind at the commencement of these storms is from a northern quarter, usually from northeast to northwest, and during the latter part of the gale, it blows from a southern quarter of the horizon.

7. North of the parallel of 30°, and while pursuing their course to the northward and eastward, these storms commence with the wind from an eastern or southern quarter, and terminate with the wind from a western quarter.

8. On the outer portion of the track, they exhibit at their commencement a southerly wind, which, as the storm comes over, veers gradually to the westward, in which quarter it terminates.

9. Along the central portion of the track, the first force of the wind is from the southeast; but after blowing for a certain period, it changes suddenly to an opposite point, from which quarter it blows with equal violence, till the storm has passed over: it is under this portion of the storm that we notice the greatest fall of the barometer, and the mercury usually begins to rise a short time previous to the change of wind.

10. On the inner portion of the track the wind commences from a more eastern or northeastern point of the horizon, and afterwards veers by north to a northwest or westerly quarter, where it finally terminates.

11. Hence Mr. Redfield infers that the portion of the atmosphere which composes the body of the storm blows in a horizontal circuit around a vertical axis of rotation, which is carried onward with the storm, and that the direction of the circuit is from right to left.

12. The barometer always sinks while under the first portion of the storm, and rises again under the last portion of the gale.

In 1835 Mr. Redfield published an analysis of several additional storms which visited the American coast, and accompanied his paper with a chart, upon which eleven of these tracks were carefully represented. In subsequent years Mr. Redfield continued his investigations, and in 1846 he published an analysis of three additional hurricanes, making sixteen storms whose tracks are delineated upon his chart of the Atlantic coast. The results of all these investigations served to confirm substantially the conclusions published in 1833.

In the Journal of the Franklin Institute for April, 1836, Mr. Espy commenced the publication of a series of essays, in which he announced a new theory of storms; and he has since continued his researches up to the present time. The following generalizations, given in his own words, are the latest at which he has arrived:

1st. The rain and snow storms, and even the moderate rains and snows, travel from the west towards the east, in the United States, during the months of January, February, and March, which are the only months yet investigated.

2d. There is a depression of the barometer near the central line of the storm.

3d. The central line of minimum pressure is generally of great length from north to south, and moves sideforemost towards the east.

4th. This line is sometimes nearly straight, but generally curved, and most frequently with the convex side towards the east.

5th. The velocity of this line is such, that it travels from the Mississippi to the Connecticut river in about twenty-four hours; and from the Connecticut to St. John, Newfoundland, in nearly the same time, or about thirty-six miles an hour.

6th. When the barometer falls suddenly in the western part of New England, it rises at the same time in the valley of the Mississippi, and also at St. John, Newfoundland.

7th. In great storms, the wind, for several hundred miles on both sides of the line of minimum pressure, blows towards that line directly or obliquely.

8th. The force of the wind is in proportion to the suddenness and amount of the barometric depression.

9th. In all great and sudden depressions of the barometer, there is much rain or snow; and in all sudden great rains or snows, there is a great fluctuation of the barometer.

10th. Many storms are of great and unknown length from north to south, reaching beyond our observers in the gulf of Mexico, on the one hand, and beyond the northern lakes on the other, while their east and west diameter is comparatively small. The storms, therefore, move sideforemost.

11th. Most storms commence in the "far west," beyond the stations of our most western observers; but some commence in the United States.

12th. When a storm commences in the United States, the line of minimum pressure does not come from the "far west," but commences with the storm, and travels with it towards the east.

13th. There is generally a lull of wind at the line of minimum pressure, and sometimes a calm.

14th. When the wind changes to the west, the barometer begins to rise.

15th. There is generally but little wind near the line of maximum pressure, and on each side of that line the winds are irregular, but tend outwards from that line.

16th. The fluctuations of the barometer are generally greater in the northern than in the southern parts of the United States.

17th. The fluctuations of the barometer are generally greater in the eastern than in the western parts of the United States.

18th. In the northern parts of the United States, the wind, in great storms, generally sets in from the north of east, and terminates from the north of west.

19th. In the southern parts of the United States the wind generally sets in from the south of east, and terminates from the south of west.

20th. During the passage of storms the wind generally changes from the eastward to the westward by the south, especially in the southern parts of the United States.

The importance of verifying, modifying, or refuting these generalizations, will appear more fully by a consideration of the following theory, which first led to the adoption of the plan of laying down the phenomena of storms on maps, as here recommended to you:

1st. When the air near the surface of the earth in a particular locality acquires a higher temperature or a higher dew point than that of surrounding regions, it will ascend, on account of a less specific gravity—perpendicularly if there is a calm.

2d. As it ascends it comes under less pressure and expands, and becomes colder by expansion, about one degree and a quarter for each hundred yards.

3d. The dew-point falls about one-quarter of a degree, by the expansion of the vapor, for each hundred yards; and, therefore, when the ascending air rises as many hundred yards as the dew-point is below the temperature of the air at the surface of the earth in degrees of Fahrenheit, the cold of expansion of the air will begin to condense the vapor contained in it, and thus form cloud.

4th. As soon as the vapor begins to condense into cloud, the latent caloric will begin to be evolved, which will diminish the cooling effect of its expansion in its further ascent, sometimes a little more and sometimes a little less than one-half, according as the dew-point is above or below 70° of Fahrenheit.

5th. When the air has ascended high enough to have condensed by the cold of expansion, from diminished pressure, one-hundredth of its weight of vapor, its temperature will be about 48° warmer from the evolution of the latent caloric than it would be by going up to the same height without vapor in it, and will then be about 48° warmer than the air around the cloud at the same elevation, and of course about one tenth lighter.

6th. The air in the cloud being thus specifically much lighter than the surrounding air, will ascend, and, in ascending, spread out in all directions above, overlapping the air of surrounding regions, and thus causing the barometer to rise all round the cloud to a distance proportional to the magnitude of the cloud.

7th. Whilst the barometer is rising all round the cloud from the increasing weight of the air, it will fall under the central regions of the cloud in proportion to the quantity of air spreading out above.

8th. The air near the surface of the earth will now rush in on all sides from the regions around the cloud, where the barometer stands high, towards the central regions, where the barometer stands low, with a volocity proportional to the square root of the difference of pressure.

9th. The air thus rushing in under the cloud on all sides will ascend, and carry up its vapor with it, and will condense it into cloud by the cold of expansion from diminished pressure, as before, and thus the process of cloud-forming will be continued.

10th. As the principal part of this upmoving current of air is in the upper regions of the atmosphere, which move all the year, over the United States, from west to east, the cloud, with its whole column of light air, must also move in the same direction.

"Dr. Hare has turned his attention to the electrical phenomena which accompanies the more violent exhibitions of the storm when it assumes the form of a tornado. He agrees with Mr. Espy in opinion as to inward and upward direction of the wind towards the middle of the storm, but differs from him with respect to the cause of the current. He proposes a definite theory of the phenomena of the tornado, founded on well known laws of electrical action, combined with facts of observation. It has been fully established by experiment in different parts of the earth that there is an accumulation of positive electricity in the upper regions of the atmosphere, that the surface of the earth relative to the lower stratum of air is slightly negative, and that space void of air may be considered an electrical conductor. From these facts Dr. Hare infers that the surface of the earth, the surrounding atmosphere, and the space immediately around and exterior to the atmosphere, form three concentric spheres, of which the outer and inner are constantly charged with opposite electricity. The arrangement is, therefore, precisely that of a charged leyden jar, of which the exterior sphere is analogous to the outer coating, the surface of the earth to the inner, and the intervening atmosphere to the non-conducting glass. The clouds are insulated conductors floating between the two coatings, and therefore liable to be variously charged by induction as their position relative to each other and the two coatings is varied. In some cases the arrangement may be such as to form a series of steps of intermediate conductors, each electrified by induction, so as to produce a violent ascending current or *convective* discharge from the surface of the earth upwards.

"The theories of Redfield, Espy, and Hare may not be found incompatible in all points; and whatever may be the future state of our knowledge relative to them, they point to definite objects of inquiry, which cannot fail to reward proper observation with a rich harvest of important results."

The idea occurred to me that more might be learned from a complete analysis of a single storm, than from a partial analysis of several storms; and that any storm of strongly marked characteristics, if fully investigated, must prove a complete *experimentum crucis*, at least between the theories of Messrs. Redfield and Espy. I accordingly selected the storm of December 20, 1836, for a thorough examination. I obtained barometric observations from 27 different stations within the United States and the neighboring British possessions. I also obtained meteorological journals, not containing barometric observations, from 28 military posts, from 42 academies in the State of New York, and from five other stations; making 102 in all, besides several stations beyond the probable limits of the storm.

In analyzing these materials, the barometric observations were all graphically represented by curves, showing the fall and rise of the barometer, with the time of its minimum height. Then joining by a line all those places where the minimum of the barometer occurred at the same instant, we are furnished with the means of measuring the rate of progress of the great atmospheric wave. On the southern border of the United States, this velocity varied from 17 to 29 statute miles per hour; and on the northern border from 17 to 37 miles. The leading characteristics of this storm were as follows: After a clear and cold interval, with barometer high, the wind commenced blowing from the south. The barometer fell rapidly; the thermometer rose; rain descended in abundance. The wind veered suddenly to northwest, and blew with great violence. The rain was succeeded by hail or snow, which continues but a short time. The barometer rises rapidly; the thermometer sinks as rapidly. These changes are experienced progressively from west to east.

This storm was not circular. The area of rain and snow was about 500 miles broad from east to west. Its length from north to south was known to be 800 miles, and probably was not less than 1,500. For nearly a day before the crisis, the wind blew from the southern quarter, and generally for several hours from the southeast. After the minimum of the barometer, the wind blew with great violence from nearly the opposite point; commonly the northwest. Here was clearly indicated a prevalent tendency of the wind towards a central line; but, unfortunately, the observations embraced only one-half the area of the storm. The oscillation of the barometer showed a steady increase from latitude 25° to Quebec. The centre of the storm, therefore, could not have been south of Quebec, and north of this place we could obtain no observations.

I was now desirous of investigating a storm of marked characteristics which could be *entirely surrounded*, so that more of its features would need to be supplied by conjecture. Two storms which occurred in February, 1842, appeared tolerably well suited to my purpose, and were selected for a new investigation. Great pains were taken to collect materials from every part of the United States. I succeeded in obtaining barometric observations from 64 different stations. I also procured registers, without barometric observations, from 41 military posts, and 22 other stations, making 127 in all, not including registers from several stations too remote to be of any service in the proposed investigation.

I commenced the analysis of the storm of February 1–5, by following the same course I had pursued with the storm of 1836, viz: representing the barometric observations by curves which should exhibit the fall and rise of the mercury, with the time of minimum height; and from the time of minima I proposed to deduce the progress of the storm. But I was disappointed in my expectations. I did not obtain such a uniform rate of progress as I had anticipated. After some time I perceived that my observations embraced two centres of disturbance; that I had got at least two storms in close juxtaposition, and interfering with each other. I then discovered that my lines of barometric minimum represented relations which were *extremely complex*, and were not well adapted to my purpose, which was the development of physical causes. I therefore sought for some mode of graphically representing the observations which should be founded upon *simple relations*, and be better adapted to suggest the causes of the phenomena. I at last settled upon a method which appears to me well suited to this purpose, and substituted for lines of *minimum pressure*, lines of *equal pressure*. Having determined, as well as I was able, the mean height of the barometer at each station, I compared each observation with the mean. I then drew a line upon a map of the United States, passing through all those places where the barometer stood at its mean height. This line may be called the line of mean pressure. I then drew a line through all the places where the barometer stood 2 inches above the mean, and another for 4 inches above the mean. So, also, I drew a line through all the places where the barometer stood 2 inches below the mean; another for 4 inches below; and others for 6 inches, 8 inches, and 100 inches below the mean height. These lines must, from the nature of the case, be continuous curves; and the centre of these curves must be a point of maximum or minimum pressure. Near the middle of a great storm we find a point of minimum pressure—that is, *the centre of a vortex;* and the lines of equal pressure will indicate at a glance whatever connexion there may be between the weight of the air and the direction of the wind.

Upon a similar principle, all the observations of the thermometer were graphically represented upon the same chart. A line joining all those places where the thermometer stands at its mean height for the given hour and month is marked zero, and may be called the line of mean temperature. Another line joins all those places where the thermometer is 10° above the mean, and others for 20° and 30° above the mean. So, also, lines are drawn for 10° and 20° below the mean temperature. There are also continuous lines surrounding a point of maximum or minimum thermometric disturbance; not points of maximum or minimum temperature absolutely, for we only regard the deviation from the mean temperature of the place for the given hour and month. These barometric and thermometric curves exhibit some conformity to each other, but are far from being identical. The direction of the wind is represented by arrows, and its force is indicated, so far as convenient, by their length.*

Other phenomena are now indicated by *colors*. Those regions where the sky was unclouded, or where the cloudiness was less than one-half, are colored blue; those where the sky was entirely overcast, or the cloudiness exceeded one-half, but without rain or snow, are colored brown. Those regions upon which snow is falling, are colored green; and those where rain is falling, are colored yellow. Thus, nearly every important circumstance of a storm is presented to the eye at a single glance. All these particulars will be understood from the two accompanying charts, illustrating the progress of the storm of February 16, 1842.

In both the storms of February, 1842, after they had acquired considerable violence, there was a prevalent motion of the winds inward, with a tendency to circulate around the centre, in a direction contrary to the sun's motion. The motion of the wind, therefore, was neither wholly centripetal nor wholly rotary, but a combination of the two. As long as the wind was moderate, neither of these tendencies was clearly marked, and there were numerous perplexing anomalies, probably occasioned in many instances by the inequalities of the earth's surface. The storm of February 16 travelled in one day 560 miles in a direction N. 53° E., making its velocity 23 miles per hour. The storm of February 1–5 remained for two days nearly stationary, and then travelled N. 62° E. at the rate of 36 miles per hour. On the whole, then, we may conclude that when storms are violent, and there is a great depression of the barometer, the direction of the wind presents considerable regularity, being spirally inward towards the centre of the storm; but when the winds are moderate, which is the case of most frequent occurrence, this tendency is very fully developed, and the subject demands more particular investigation.

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*For an account of the method employed by Mr. Espy in representing the phases of storms, see his communication, appendix No. 3.

III. I now proceed to inquire what encouragement there is to a further prosecution of meteorological researches.

In all our investigations respecting natural phenomena we assume that the operations of nature are subject to laws, and that these laws are uniform in their operation. A law of nature knows *no exceptions*. There is no place for science except upon this basis. Are storms subject to laws, and are these laws invariable? Such a question may appear almost like trifling, and yet many argue as if they had but feeble faith in these principles. It is presumed that no philosopher will seriously question them; but it may be said that these laws are so complex that they can never be discovered. What right have we to make such an assumption? Have not the laws of nature been actually discovered in many cases in which they appear equally complex? How long is it since comets were believed to rush through the planetary system in defiance of all law; or if subject to law, then a law of such complexity that all attempt to discover it seemed hopeless? Now, these laws appear so simple that we wonder they were not sooner discovered. All the laws of nature appear complex while they remain unknown; but when once discovered, we are surprised at their simplicity. Why should storms form an exception to this rule? Does the past history of meteorological investigations justify such a conclusion? Have our researches been rewarded with no success? Far otherwise. During the brief period that meteorology has been cultivated we have arrived at many important generalizations, which, if not entitled to the name of laws of nature, afford the strongest assurance that such laws exist, and that we are on the eve of their discovery. We have discovered that the great storms of the United States travel nearly from west to east. No instance has yet been found in which a violent storm in these latitudes has travelled from east to west, although some great rain storms have remained nearly stationary for a day or two. Violent storms usually travel at the rate of about 25 miles per hour, although this velocity has been observed to rise as high as 40 miles. These storms are of various dimensions. While summer showers may cover an area of but a few miles, winter storms sometimes have a diameter of 1,000 miles and upwards. The duration of a storm at any place depends upon its extent, and upon the velocity of its progress. If the diameter of a storm is 500 miles, and its progress 25 miles per hour, its duration at a place situated in the centre of the track will be 20 hours, and less for places out of the centre. Hence we may form some estimate of the superficial extent of a storm from its duration at any place. The direction of the wind is generally inward towards the area of rain, and in violent storms there is a tendency to rotation about a vertical axis. Over a rugged country there are so many obstacles to the wind's progress, that observations at the surface of the earth present a great many anomalies; but at sea there are no such obstacles, and the observations of the wind exhibit a greater uniformity and simplicity. The barometer falls under the first half of the storm, and rises as the storm recedes; the centre of the storm coinciding nearly with the greatest depression of the barometer. The passage of this centre is marked by a sudden change of wind to a point of the compass nearly opposite to that from which it had previously been blowing.

The preceding propositions are deductions from a large number of particular cases which have been investigated. If any one of these propositions requires some modification, the fact will be disclosed by a continuance of the same system of observations. This is a legitimate subject of investigation. Further observations will either prove or disprove these propositions. Some of them may require a little modification, although it is believed they are all substantially true.

We are justified, then, in inferring that storms are subject to laws; that these laws are uniform in their operation, and that they may be discovered. We have already made important progress in this discovery, and we are persuaded that we have only to follow up the same methods of investigation, and our labor will be rewarded with more brilliant discoveries. The results of such knowledge are too important to be overlooked. When we have fully learned the laws of storms, we shall be able to *predict* them. This attainment is of the highest practical importance. If the navigator can anticipate the approach of a storm by 24 hours, this interval will be quite sufficient to place him beyond the reach of its fury; and although the landsman could not remove his habitation from the approaching tornado, he might withdraw his family and the most valuable of his effects to a place of security.

When the magnetic telegraph is extended from New York to New Orleans and St. Louis, it may be made subservient to the protection of our commerce, even in the present imperfect state of our knowledge of storms. The severe winter storms which desolate the Atlantic coast come from the valley of the Mississippi, and require about 24 hours to travel from St. Louis to New York. The approach of a dangerous storm might therefore be telegraphed at New York hours before its arrival, while the sky was yet unclouded and the wind propitious, in season to save a fleet of ships from putting to sea, to be engulphed in the bottomless deep. The science of meteorology is already sufficiently advanced to render important service to commerce, if practical navigators would but heed the indications of the barometer, and make themselves familiar with the principles which observation has established.

It is, then, not without reason that we expect to be able to predict an approaching storm, long enough in advance to render such knowledge of the highest importance; but it may admit of more serious question, whether we shall ever be able to predict the general character of a season with sufficient precision to be of any value to the farmer. But why should we despair of ultimately attaining even this result? If one season is remarkable for its cold, and another for its heat, is there no reason for it? Is there not some cause acting upon a grand scale to bring about this result? Is there no cause which brings an excess of winds from the north, or an excess from the south—which brings an unusual amount of precipitation, or an extraordinary degree of cloudiness? And cannot this cause be discovered? This discovery may require the exercise of patience—it may require a long continued series of observations; but to assume that a principle cannot be discovered, is unphilosophical. This is a legitimate subject of investigation, and it is a field in which the laborer cannot fail of reaping his reward. We only need adequate observations—observations sufficiently precise, and upon a scale of proper extent. We conclude, then, that there is the highest encouragement to the prosecution of meteorological inquiries—that by continuing our researches we may hope to arrive at general laws, and that a knowledge of these laws cannot fail to contribute to the wealth and happiness of mankind.

I proceed, therefore, to inquire—

IV. Upon what plan the observations should be conducted to secure the object proposed.

Violent winter storms appear most suitable for investigation, because they are of longer duration, and their features are more strongly marked. The oscillation of the barometer affords the surest criterion for identifying a storm in its progress from day to day; and these oscillations are greatest in winter.

1. How large an area should be covered by our observations, to enable us to investigate advantageously the phenomena of our winter storms?

Our observations ought plainly to embrace the entire region of the storm, and even extend somewhat beyond its margin, for in no other way could we be sure that we had found its limits. Now, the great storms which are experienced between the parallels of 40 and 45 degrees are frequently felt as far south as latitude 30°, and sometimes to 25°. South of this line, the oscillations of the barometer, except in a few rare instances, are quite small; and it is probable that the limiting parallel of the trade winds forms a dividing line between the ordinary storms of the torrid and temperate zones. We should therefore extend our system of observations to the southern margin of the United States. The northern limit of our ordinary winter storms remains unknown. In the storm of December 21, 1836, the oscillation of the barometer increased uninterruptedly with the latitude as far as the most northerly station, Quebec. Only the southern half of the storm was included within the United States. This storm was probably experienced as far northward as to the northern shore of Hudson's bay. We should therefore extend our system of observations to the northern margin of the United States; and to render our system complete, requires the co-operation of the British government to extend the observations to the entire region of Hudson's bay.

If we merely wished to embrace in our observations the area of a storm for a single hour, then the interval between the Mississippi and the Atlantic would ordinarily be sufficient. But we could not thus expect to discover the origin of a storm. We must trace it in its progress from its commencement to its greatest violence, and thence to its decline. By observing *under what circumstances* it takes its rise, we may hope to be able to discover the *cause* of its activity. We should therefore aim to trace every storm from its origin to its close. At the ordinary rate of progress a great storm would travel from the Rocky mountains to the Atlantic in two days. What influence this range of mountains may have upon our storms is unknown, except from conjecture. We cannot suppose that a storm could travel from the Pacific to the Atlantic without experiencing some modification in passing over a range of mountains rising into the region of perpetual snow. What this modification is, can be determined by corresponding observations on both sides of the mountain. I therefore conclude that it is important to embrace in our system of observations the entire continent from the Pacific to the Atlantic, and from the gulf of Mexico to the northern shore of Hudson's bay.

2. At what distance from each other should stations of observation be selected?

If we were investigating the phenomena of a summer shower, it would be indispensable to have stations at very short distances from each other; but in winter storms this is less important. I consider it, however, desirable to have stations at intervals of fifty miles from each other, and such might probably be obtained in the more thickly settled parts of the United States. In other parts of the country this would be impracticable; but I would strive to obtain at least one station for every hundred miles square. At this rate we should need about three hundred observers for the United States. It is not doubted that this number might be obtained; indeed, we have well nigh this number already, but, unfortunately, they are very unequally scattered over the country.

3. What materials have we to depend upon, and what is wanting to complete the plan of one observer to every hundred miles square?

We have the government observations at the military posts, now 57 in number. We have observations from 41 academies in the State of New York, and 25 stations in Pennsylvania. Then we have borometric observations from about 40 other individuals scattered promiscuously over the country; and thermometric observations from about 20 others. There is, besides, a large number of those who have meteorological instruments, which they occasionally consult, but do not feel sufficient interest in the subject to keep a systematic journal. If a grand meteorological effort were made, with a prospect of yielding important results, probably most of those persons might be pressed temporarily into the service. New England is pretty well manned with observers, except in the northern part, where three or four more are greatly needed. Probably, if instruments could be furnished without expense, volunteers might be found to make the observations. New York and Pennsylvania are fully organized; but throughout the remainder of the United States the stations are few and scattered. Excluding Oregon and the Indian territory, the remaining States embrace about a million and a half square miles, and at our lowest estimate would require about 150 observers. We have 50 observers already in the field, leaving 100 to be provided for. How is this deficiency to be supplied? If our government would direct meteorological observations to be made at the principal light-houses along our coast and the chain of the great lakes, it would leave only the interior of the country to be provided for; and if instruments could be furnished without expense, volunteers might probably be found to take the observations at most of the remaining stations.

To extend this system of observations further westward must be attended with serious difficulties. We already have registers kept at most of the military posts in the Indian country; and as new posts are established, it is presumed that the government will direct them to be improved for observations. We may thus hope ere long to obtain a line of stations reaching to the mouth of the Columbia river; and as settlements extend, observations will multiply on the other side of the Rocky mountains. On the whole, then, it is believed we might occupy the whole United States from its northern to its southern border, and from the Atlantic to the Indian territory, beyond the Mississippi, with an army of meteorologists sufficiently numerous to enable us to investigate advantageously the phenomena of our great storms, provided instruments could be furnished gratuitously for about 100 stations; and, moreover, we might probably have a line of observers at unequal intervals, reaching even to the Pacific ocean. The expense of 100 sets of meteorological instruments may be estimated at $3,000.

It is believed that the Smithsonian Institution might undertake to furnish these instruments and organize a grand system of meteorological observations upon this continent, in perfect harmony with the views of James Smithson. Mr. Smithson bequeathed his property, in trust, to this country, *for the increase and diffusion of knowledge among men.* It is believed that by carrying out the plan now suggested, knowledge would be increased and diffused, and it would be that kind of knowledge which would contribute to the comfort and happiness of society, as much as perhaps any other which can be named.

4. Specific plan of operations proposed.

The following is proposed for the consideration of the Regents of the Smithsonian Institution, as the outline of a grand meteorological campaign.

Let a meteorological department of the institution be organized, under the direction of the Secretary, with a suitable assistant. Let a united effort be made to secure for a limited period, and to the greatest possible extent, the co operation of the general government, the several State governments, scientific societies, and the friends of science throughout the country. Let the general government be requested to give the greatest possible extension to their system of observations at the military posts, and to authorize similar observations to be made at certain light-houses, so far as may be necessary to complete a line of stations at intervals of 100 miles along the whole extent of our coast, and the chain of the northern lakes. Let the regents of the University of the State of New York be requested to reorganize the system of observations in that State, by furnishing barometers to about 20 of their academies, and directing the observations to be reported regularly to Washington. Let the committee having charge of the observations in Pennsylvania be requested to adopt the same plan of observations which shall be agreed upon for the other States, and report regularly to Washington. Let application be made to the legislatures of each of the other States, inviting them to co-operate in this noble scheme, by emulating the examples of New York and Pennsylvania. Let the scientific societies throughout the United States be appealed to, to assist in organizing an efficient corps of observers, each in its appropriate sphere; and let individual observers throughout the country be requested to unite their efforts in one uniform and systematic plan of operations. Let them be requested to report their equipment of instruments, and state whether they will undertake to provide whatever may be wanting, at their own expense. Let then the entire country be divided into sections not exceeding 100 miles square; and in each section not already provided for, let an observer be sought out, who shall volunteer to make the observations if instruments are furnished him. Let then the Smithsonian Institution assume the burden of furnishing the necessary instruments to those who are unable to do it themselves. It is estimated that the sum required for this purpose would not exceed three thousand dollars. Let a form of observations be provided, and instructions to all the observers, who shall report at least quarterly to the Secretary at Washington. Let it be the duty of the meteorologist to take charge of the observations, to discuss and analyze them, and endeavor to deduce from them the laws of storms. Let these investigations be published, in as much detail as may be thought demanded by the claims of science, and let a copy of whatever may be published be forwarded to each observer, in order that he may be stimulated in his work by finding that his labor is not wholly in vain.

Finally, to give to this system its greatest efficiency, the co operation of the British government and of the Hudson's Bay Company is absolutely indispensable. The greater part of our severe storms extend far beyond the limits of the United States on the north. Observations confined to the United States will therefore seldom give us the entire area of a storm, and frequently only half of it. The remaining half must then be supplied by conjecture. This would leave all our investigations in an unfinished and unsatisfactory state. We want a line of stations through Canada, along the shores of Hudson's bay, to the farthest outpost of civilization. At every government station a meteorological journal might doubtless be kept; and it is confidently believed that if the Smithsonian Institution would embark in earnest in a grand meteorological crusade, the British government would cheerfully contribute its efficient co operation.

A system of observations like that here contemplated, if faithfully prosecuted for one year, would well nigh exhaust the subject. The storms of each year are probably but a repetition of those of the preceding. Nevertheless, it would be unsafe to calculate upon concluding the war after a single year's campaign. Experience in similar cases has shown that it requires considerable time to organize so large a plan of operations, and the system would not, probably, attain its greatest efficiency the first year. It would be unwise, therefore, to calculate upon a less period of operations than three years. But it is believed that in this period, results would be developed which would more than repay all the expense of time and money incurred; while, upon the existing scale of operations, the progress of discovery must be slow and uncertain. In order to enable us to investigate advantageously the phenomena of a single storm, we must have simultaneous observations from a vast number of stations. Observations from a few stations, though continued to the end of time, will not accomplish the same object. How, then, can the Regents of the Smithsonian Institution more faithfully carry out the views of its benevolent founder, than by vigorously prosecuting these researches to their completion? How can they contribute more directly and powerfully to the prosperity of our commerce; and, through commerce, add to the wealth and happiness of the whole country?

I remain, very respectfully, your obedient servant,

ELIAS LOOMIS.

Joseph Henry, LL. D.,
Secretary Smithsonian Institution.

APPENDIX No. 3.

Extract from a communication from Professor Espy on the subject of Meteorology.

My dear sir: I am much pleased to learn from your letter that the Regents of the Smithsonian Institution would probably make an appropriation for the purpose of establishing a series of observations "to solve, if possible, the problem of American storms." I am of opinion that no subject of science is more worthy of the attention of the institution; and in answer to your request that I should furnish you with suggestions on the subject, I refer you, in the first place, to my work entitled "Philosophy of Storms," from page 77 to page 172, for a full development of the plan adopted twelve years ago of investigating the phases of storms, by the joint committee of the American Philosophical Society and the Franklin Institute, of the State of Pennsylvania.

The plan then suggested, and in part carried out, was adopted in the investigation of the phases of storms during the five years in which I was in the service of the government. In my "circular to the friends of science," in which I invited all persons in the United States keeping journals of the weather to send them to the office of the Surgeon General, Washington, I announced my intention to lay down on skeleton maps of the United States, by appropriate symbols, all the most important phases of great storms which might come within the range of our simultaneous observations; and thus it was hoped we should be able to determine the *shape* and *size* of all storms;. whether they are *round* or *oblong;* and if oblong, whether they move *sideforemost* or *endforemost*, or *obliquely;* and to ascertain their *velocity* and *direction* in all the different seasons of the year; the *course* of the wind in and beyond the borders of the storm; the *fluctuation* of the barometer and *change* of temperature which generally accompany storms, and the *extent* to which their influence is felt beyond their borders.

Having obtained observations from a wide extended correspondence, I laid down the phases of the storms on maps, as presented in my first report, and I have continued the same plan in my second report, now ready to be printed. In the investigation of the materials of the second report, comprising the observations of three years and three-quarters, I have discovered no facts contradictory to the generalizations deduced from the winter storms of three months embraced in the second report. I consider it of the highest interest, by an extended series of observations, which I hope the Smithsonian Institution will cause to be made over a much wider territory than my observation embraced, to verify, or, if necessary, modify these generalizations, and also to investigate the laws of summer storms, which I fear cannot be done without much more numerous observers than I was able to procure.*

* * * * * * * * *

The elements of the theory I have given you are the same as those presented in my work on storms; and though I have demonstrated them approximately, and have no doubt of their general accuracy, yet I am convinced that nothing will establish the truth on this subject in such a manner as to carry conviction to every mind but a series of wide extended simultaneous observations, continued for a long time, by numerous observers. Such a series I hope is now about to be made.

It would be inappropriate to extend this communication to a greater length; but I will explain to you at another time some experiments connected with meteorology, which I wish to see performed, on the electricity of steam, and on the specific caloric of atmospheric air and other gases, with the aid of my nephelescope, and on the law of cooling of air in great expansions of air by diminished pressure.

I remain, very respectfully, yours, &c.,

JAMES P. ESPY.

Prof. J. Henry,
Secretary Smithsonian Institution.

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*The generalizations and theory of Mr. Espy are given in the preceding report of Professor Loomis, page 197.

30th Congress,
2d Session.

[HO. OF REPS.]

Miscellaneous.
No. 48.

THIRD ANNUAL REPORT

OF THE

BOARD OF REGENTS

OF

THE SMITHSONIAN INSTITUTION,

TO

THE SENATE AND HOUSE OF REPRESENTATIVES,

SHOWING

THE OPERATIONS, EXPENDITURES, AND CONDITION OF THE INSTITUTION

DURING THE YEAR 1848.

February 19, 1849.
Laid upon the table, and ordered to be printed.

WASHINGTON:
TIPPIN & STREEPER, PRINTERS.
1849.

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OFFICERS AND MEMBERS OF THE SMITHSONIAN INSTITUTION:

The President of the United States,
Ex-officio Presiding Officer of the Institution.
The Vice President of the United States,
Ex-officio Second Presiding Officer.
George M. Dallas,
Chancellor of the Institution.
Joseph Henry,
Secretary of the Institution.
Charles C. Jewett,
Assistant Secretary, acting as Librarian.
William W. Seaton,
Alexander D. Bache, } *Executive Committee.*
James A. Pearce,

REGENTS:

George M. Dallas, *Vice President of the United States.*
Roger B. Taney, *Chief Justice of the United States.*
William W. Seaton, *Mayor of the city of Washington.*
James A. Pearce, *Member of the Senate of the United States.*
James M. Mason,[*] *Member of the Senate of the United States.*
Jefferson Davis, *Member of the Senate of the United States.*
Henry W. Hilliard, *Member of the House of Representatives.*
George P. Marsh, *Member of the House of Representatives.*
Robert McClelland, *Member of the House of Representatives.*
Rufus Choate, *Citizen of Massachusetts.*
Gideon Hawley, *Citizen of New York.*
Wm. C. Preston, *Citizen of South Carolina.*
Richard Rush, *Citizen of Pennsylvania.*
Alexander D. Bache, *Member of National Institute, Washington.*
Joseph G. Totten, *Member of National Institute, Washington.*

MEMBERS EX-OFFICIO OF THE INSTITUTION:

James K. Polk, *President of the United States.*
George M. Dallas, *Vice President of the United States.*
James Buchanan, *Secretary of State of the United States.*
Robert J. Walker, *Secretary of the Treasury of the United States.*
William L. Marcy, *Secretary of War of the United States.*
John Y. Mason, *Secretary of the Navy of the United States.*
Cave Johnson, *Postmaster General of the United States.*
Isaac Toucey, *Attorney General of the United States.*
Roger B. Taney, *Chief Justice of the United States.*
Edmund Burke, *Commissioner of Patents of the United States.*
William W. Seaton, *Mayor of the city of Washington.*

HONORARY MEMBERS OF THE INSTITUTION.

[No honorary members have yet been elected.]

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[*] Appointed in place of Mr. Breese, resigned.

THIRD ANNUAL REPORT

OF

THE BOARD OF REGENTS

OF

THE SMITHSONIAN INSTITUTION,

SHOWING

The operations, expenditures, and condition of the Institution up to January 1st, 1849.

To the Senate and House of Representatives:

In obedience to the act of Congress establishing the Smithsonian Institution for the increase and diffusion of knowledge among men, the undersigned, in behalf of the Board of Regents of the Smithsonian Institution, submit to Congress, as a report of the operations, expenditures, and condition of the Institution, the following documents, viz:

1. Proceedings of the Board of Regents at their last session.
2. Annual report of the Secretary, giving an account of the operations of the Institution during the past year, accompanied by a report from the Assistant Secretary, relative to the library.
3. Report of the Executive Committee, exhibiting an account of the expenditures of the Institution, and of its financial condition on the 1st of January, 1849.
4. Report of the Building Committee relative to the progress made in the erection of the Smithsonian edifice, and in the improvement of the grounds, with a statement of the expenditures which have thus far been made on the same.

From these documents it will be seen that the Smithsonian Institution has already commenced its operations for the increase and diffusion of knowledge among men; that the plan of organization which has been adopted, and the works which have been completed and begun, have met with the approbation of men of eminence in literature and science both in this country and in Europe; that the Institution has received a valuable donation of chemical and philosophical apparatus from our distinguished countryman, Dr. Robert Hare, of Philadelphia, and that its financial affairs are in a very favorable condition.

From the report of the Building Committee it will be seen that the Smithsonian edifice is as far advanced as the financial arrangements which have been adopted would permit; that the two wings and connecting ranges will be ready for occupation early in the present year, and that the whole will be completed in three years from next March.

The report of the Executive Committee shows, that after all the expenditures for the erection of the building and the improvement of the grounds, for the purchase of books and apparatus, for publications and researches, and for all other purposes, the value of the funds at the present time exceeds by a small amount that of the original appropriation of the act of Congress of September, 1846, establishing the Institution.

Respectfully submitted.

G. M. DALLAS,
Chancellor of the Smithsonian Institution.
JOSEPH HENRY,
Secretary of the Smithsonian Institution.

JOURNAL OF PROCEEDINGS

OF THE

REGENTS OF THE SMITHSONIAN INSTITUTION,

AT THEIR

THIRD ANNUAL MEETING.

WEDNESDAY, December 13, 1848.

This being the day fixed by their resolutions of September 9, 1846, and of December 21, 1847, for their regular annual meeting, the Board of Regents of the Smithsonian Institution convened in the room of the Vice President of the United States, in the Capitol, at 12 o'clock, m.

Present, the Chancellor, Messrs. Bache, Breese, Davis, Hilliard, Marsh, McClelland, Pearce, Seaton, and Totten.

A quorum being present, and the Chancellor being obliged to leave in consequence of his duties in the Senate, Mr. Totten was called to the chair.

The Secretary stated to the meeting that Messrs. Choate and Hawley had been reappointed as regents to fill the vacancies occasioned by the expiration of their first term of service.

The Secretary also stated that he had sent telegraphic messages to Messrs. Choate and Hawley announcing their reappointment, and informing them that the board would probably transact no business for some days in order to give them an opportunity to be present.

Whereupon, on motion,

The board adjourned to meet on Monday, the 18th instant, at 11 o'clock, a. m.

MONDAY, December 18, 1848.

The board met agreeably to adjournment.

Present, the Chancellor, Messrs. Bache, Davis, Marsh, McClelland, Pearce, Seaton, and Totten.

Mr. Seaton, from the Executive Committee, presented a report of the expenditures and state of the funds of the institution.

Mr. Totten, from the Building Committee, presented a report on the progress of erection of the Smithsonian edifice and improvements of the grounds, with estimates of future expenses, &c.

The Secretary presented his annual report of the operations of the Institution, accompanied by a report of the Assistant Secretary relative to the library.

On motion, it was

Resolved, That these several reports be recorded on the pages of the journal.

On motion,

The board adjourned to meet on Wednesday, the 20th instant, at 11 o'clock, a. m.

WEDNESDAY, December 20, 1848.

The board met agreeably to adjournment.

Present, the Chancellor, Messrs. Bache, Breese, Davis, Marsh, Pearce, Seaton, and Totten.

On motion of Mr. Marsh, it was

Resolved, That the Secretary and Executive Committee be authorized to present to Messrs. Squier and Davis two hundred copies of their memoir contained in the first volume of the Smithsonian Contributions to Knowledge.

Mr. Marsh presented a letter from John R. Bartlett, of New York, accompanying a plan for the preparation of a new and improved dictionary of the English language, under the auspices of the Smithsonian Institution.

On motion, it was

Resolved, That the forementioned letter and plan be referred to the Secretary, the Executive Committee, and Mr. Marsh.

On motion of Mr. Marsh, it was

Resolved, That the Secretary be authorized to purchase, for the sum of one hundred and fifty dollars, the lithographic stones upon which are traced the designs for the first volume of the Smithsonian Contributions to Knowledge.

Mr. Seaton presented letters from several persons making application for employment in the institution.

The Secretary called the attention of the board to the statement made in his report relating to the valuable donation of apparatus, made to the instituion by Dr. Robert Hare, of Philadelphia.

Whereupon, on motion of Mr. Seaton, it was unanimously

Resolved, That a committee be appointed, to consist of the Chancellor, Secretary, and Mr. Pearce, to communicate in suitable terms to Dr. Hare, the thanks of the Board of Regents for the munificent present of his extensive and very valuable apparatus to the Smithsonian Institution.

The Secretary stated to the board the progress made in the distribution of the first volume of the Smithsonian Contributions to Knowledge among colleges, learned societies, and large libraries; no copies having as yet been given to individuals.

The Secretary presented a list of donations to the Institution.

The Secretary also presented letters from several distinguished individuals highly approving the plan of the proposed *Bibliographia Americana*, mentioned in his report. (See appendix A.)

On motion, the board adjourned to meet on Wednesday, the 27th instant, at 11 o'clock, a. m.

WEDNESDAY, December 27, 1848.

The board met agreeably to adjournment.

Present, Messrs. Bache, Davis, McClelland, Seaton, and Totten.

The Chancellor being absent, Mr. Davis was called to the chair.

The Secretary presented a letter from J. Disturnell, of New York city, accompanying a copy of a memorial to Congress relative to the preparation of a new Gazetteer of North America, which letter and memorial were referred to the Secretary and Executive Committee.

The Secretary also presented a letter from Francis Markoe, esq. of Washington, offering for sale to the Institution the collection of objects of natural history belonging to the estate of the late British minister to the United States, H. S. Fox, esq.,; which was referred to the Secretary and Executive Committee, it being understood that the financial arrangements of the board do not for the present allow the purchase of collections in natural history.

The Secretary also presented a letter from Archibald Campbell, esq., Deputy Secretary of the State of New York, accompanying a donation to the Institution, made in accordance with an act of the legislature of that State, of the 14 published volumes in 4to of the Natural History of New York.

On motion, the Chancellor and Secretary were requested to present the thanks of the Board of Regents for this valuable donation.

The Secretary also presented letters from several presidents of colleges; also reports from several learned societies, highly commending the programme of organization of the Institution.

Whereupon, it was

Resolved, That the Secretary be instructed to insert in the records of the Institution the names of all such individuals and societies.

On motion, it was

Resolved, That the Chancellor, Secretary, and Chairman of the Executive Committee be requested to prepare the annual report of the Regents to Congress, giving an account of the operations, expenditures and condition of the Institution.

On motion of Mr. McClelland, it was

Resolved, That the Secretary be requested to return the thanks of the Board of Regents to the Secretary of the Treasury of the United States, to the Secretary of the Navy, and to the Secretary of War for their assistance in promoting the objects of the Institution. Also, to the Hon. Mr. Irwin and Mr. Trist for their donations; and to Mr. Downs, of Philadelphia, for his computations of occultations.

At the request of Mr Seaton, the Executive Committee were allowed to withdraw their report, in order to enable them to include therein the disbursements and condition of the finances of the Institution up to the end of the year 1848.

At the request of Mr. Totten, permission was given to the Building Committee to withdraw their report for the purpose of making the same more complete.

On motion, it was

Resolved, That the board adjourn, to meet on Wednesday next, at 11 o'clock, a. m.

WEDNESDAY, JANUARY 3, 1849.

The board met agreeably to adjournment.

Present, the Chancellor, Messrs. Bache, Marsh, McClelland, Seaton and Totten; also, by invitation, Dr. Hare, of Philadelphia.

Mr. Seaton presented the revised report of the Executive Committee, which had been withdrawn for the purpose of extending the accounts up to the 1st January, 1849; which was accepted.

The Secretary read a letter from Dr. Hare, relative to the presentation of his apparatus to the Institution; which was ordered to be placed upon the journal. (See appendix B.)

Mr. Bache presented letters from J. Guillemard, esq., of Woodford, England, and from Professor Faraday, of London, concerning James Smithson; which were ordered to be preserved in the archives of the Institution.

Mr. Seaton, from the Building Committee, read a letter from Mr. Owen, late a Regent and Chairman of the Building Committee, relative to the publication of the work entitled "Hints on Public Architecture."

Whereupon, on motion, it was

Resolved, That the Building Committee be authorized, provided the same be required by the publishers, to transfer out of the appropriation originally made for experiments on building materials, a sum not exceeding two hundred dollars, to the appropriations heretofore made, for the publication of a volume on public architecture.

On motion of Mr. Seaton, the following appropriations, recommended by the Executive Committee for the service of the ensuing year, were taken up, considered, and adopted, viz·

For publication of "Contributions to Knowledge"	$3,000 00
Scientific researches and computations	700 00
Meteorological instruments and researches	1,000 00
Public lectures, &c.	500 00
Publication of scientific reports	500 00
Preparation of the general catalogue of American libraries	1,000 00
Purchase of bibliographical works and books of general reference	2,000 00
Binding, blank books, stamps, certificates, &c.	250 00
Purchase of books needed by authors of reports, &c	400 00
General expenses, including salaries of officers, expenses of the meetings of the board and of committees, clerk hire, postage, &c.	8,000 00
	17,350 00

On motion, it was

Resolved, That the Chancellor and the Secretary of the Smithsonian Institution be authorized to exchange the treasury notes belonging to the Institution for United States stock; that the certificates for the said stock be taken in the name of the Chancellor and Secretary, and that the stock and its proceeds be at the disposal of the same, under the regulations heretofore existing as to the treasury notes for the purposes of the Institution, in accordance with the several appropriations of the board.

On motion of Mr. Seaton, it was

Resolved, That the Secretary be authorized to appoint some suitable person, at a salary not to exceed four hundred dollars per aunum, to act as book-keeper and accountant of the Institution and to perform such other duties as are specified in the report of the Executive Committee.

The Secretary exhibited a copy of the last edition of Dr Hare's Chemistry, presented to the Institution by the author, containing illustrations of his apparatus now the property of the Institution, and mentioned that among the articles presented by Dr. Hare, were the blocks from which these illustrations were printed.

Whereupon, on motion of Mr. Bache, it was

Resolved, That the Secretary be requested to prepare for the use of the Institution, a descriptive catalogue of Dr. Hare's apparatus, illustrated by impressions from the original blocks.

On motion, the board adjourned to meet on Saturdav next, at 10 o'clock, a. m.

SATURDAY, January 6, 1849.

The board met agreeably to adjournment.

Present, the Chancellor, Messrs. Bache, Davis, Hilliard, McClelland, Marsh, Pearce, Seaton, and Totten.

Mr. Totten presented the revised report of the Building Committee; which was accepted.

Mr. Hilliard read a letter from Mr. Squier, which was referred to the Secretary and Executive Committee.

On motion of Mr. Bache, it was

Resolved, That as the discharge of the duties assigned to the Assistant Secretary, acting as Librarian, are now such as to give entire employment to his time, he receive from the first instant the full compensation provided by the resolution of the board, adopted January 26, 1847.

On motion of Mr. Seaton, it was

Resolved, That when the board adjourn, it adjourn to meet on Wednesday, the 7th of March next, at 10 o'clock, a. m., in the Vice President's room in the Capitol, for the purpose of electing a Chancellor, in the place of Mr. Dallas, whose term of office as Regent expires on the 4th of March next.

The Assistant Secretary, acting as Librarian, read his report relative to the Library.

The board then, on motion, adjourned to meet on Wednesday, the 7th of March next.

SECOND ANNUAL REPORT OF THE SECRETARY OF THE SMITHSONIAN INSTITUTION, GIVING AN ACCOUNT OF THE OPERATIONS OF THE YEAR 1848. PRESENTED DECEMBER 13, 1849.

Gentlemen: By a resolution of the Board of Regents, at their last annual meeting, I was charged with the execution of the details of the programme, which had been provisionally adopted, and was directed to report annually to the board the progress made in the execution of the duty assigned to me. In accordance with this resolution I present the following statement of the operations of the past year.

The programme of the plan of organization of the institution has been submitted to a number of literary and scientific societies, and in every case has received their unqualified approbation. The principal officers of these societies have expressed a willingness to co-operate with the Smithsonian Institution in carrying out the plans which have been adopted, and it is confidently believed, that as soon as these are fully developed and brought into practical operation, they will meet with general approval.

It was recommended in my last report that the details of the plan should be adopted provisionally, and should be carried into operation gradually and cautiously, with such changes from time to time, as experience might dictate. The Institution is not one of a day; but is designed to endure as long as our government shall exist, and it is therefore peculiarly important that in the beginning we should proceed carefully and not attempt to produce immediate effects at the expense of permanent usefulness. The process of increasing knowledge is an extremely slow one, and the value of the results of this part of the plan cannot be properly realized until some years have elapsed. Independently of these considerations, the financial arrangements adopted by the Board of Regents, are such as to prevent the full operation of the Institution until after three years from next March; up to that time more than one-half of the income is to be devoted to the erection of the building, and indirectly to the increase of the permanent fund.

It will be recollected that the programme embraces—

1st. The plan of publishing original memoirs on all branches of knowledge, in a series of quarto volumes.

2d. The institution of original researches under the direction of competent persons.

3d. The publication of a series of reports from year to year, giving an account of the progress of the different branches of knowledge.

4th. The formation of a library and a museum of objects of nature and art.

Publication of original memoirs.

The first volume of the Smithsonian Contributions to Knowledge has been published and partially distributed. It consists of a single memoir on the ancient monuments of the Mississippi valley, comprising the results of extensive original surveys and explorations by E. G. Squier, A. M., and E. H. Davis, M. D. It is illustrated by forty eight lithographic plates, and by two hundred and seven wood engravings. The mechanical execution of the volume will bear comparison with that of any publication ever issued from the American press.

In the publication of the first volume of the Contributions, the question occurred as to the propriety of securing the copyright to the Institution. I had not an opportunity of conferring with the Executive Committee on this point, and was therefore obliged to settle it on my own responsibility. I concluded that it would be more in accordance with the spirit of the institution to decide against the copyright. The knowledge which the Smithsonian Institution may be instrumental in presenting to the world should be free to all who are capable of using it. The republication of our papers ought to be considered as an evidence of their importance, and should be encouraged rather than prohibited.

The first memoir occupies an entire volume, and this accidental circumstance has given rise to a misconception of the plan. It has been supposed that each volume of the Smithsonian Contributions is in like manner to consist of a separate treatise on a particular subject selected with a view to popular interest. But such is not the case; each volume will generally contain a number of separate memoirs, on different branches of knowledge, similar to the usual published transactions of learned societies. The only reason why the first volume is occupied with a subject of general interest rather than one on some more abstruse branch of science is, that the memoir it contains was the *first* which was presented of the character prescribed by the plan. No preference is to be given to any branch of knowledge. The only questions to be asked, in considering the acceptance of a memoir, are, whether it is a positive addition to knowledge, resting on original research, and of sufficient importance to merit a place in the Smithsonian Contributions.

The rules adopted for the acceptance of a memoir are the same as those generally followed by learned societies. The memoir is surrendered by the author to the Institution, and no additions or alterations are allowed to be made after it has been submitted to the commission appointed to examine it, unless by their consent. A certain number of copies is presented to the author for distribution, with the privilege of striking off, at his own expense, additional copies for sale; which in most cases, particularly when the memoir is of popular interest, will be all the remuneration expected by the author.

From what has been said, it will be evident that the papers published in the Contributions cannot generally be of a popular nature. The popular effects to be produced by the Institution are principally those which may be attained by the reports on the progress of the different branches of knowledge, and by the occasional publications in connexion with these of separate treatises on some subject of special interest.

Applications have been made for the first volume of the Contributions from many academies and private institutions, and were our means sufficient, we would be pleased to supply all demands of this kind. But this is obviously impossible, for they alone would exhaust all the income of the Institution.

Preparations have been made for the publication of the second volume of the Contributions, and a sufficient number of memoirs have been already accepted, or are in preparation, to furnish the materials. Five of these are on astronomical subjects, and afford as important additions to this science as have ever been made to it in this country. Two of them relate to investigations on the new planet Neptune, which are only second in value to the original discovery of this distant member of our system. Abstracts of these have been given to the world, and have been received with general approbation. A third is a determination of the zodiac of the asteroids, or the zone in the heavens to which the positions of these small planets are confined. This paper is of much practical importance in facilitating the researches now in progress in different parts of the world relative to the nature of these fragments (as they would seem to be) of a large planet between Jupiter and Mars. It may be at once determined, by an inspection of the table annexed to this paper, whether any star mapped in an old catalogue, and now no longer to be found in the same place, can possibly be one of the asteroids. A fourth paper is an account of a new comet, the discovery of which by an American lady is one of the first additions to science of this kind, so far as I am informed, ever made in this country. The fifth memoir is an account of the Georgetown Observatory, the instruments with which it is furnished, the mode of using them which has been adopted, and the results of the observations which have been made. An important paper is also in process of preparation for the same volume on the gigantic fossil cetacean remains which are found in the southern and western States of the Union.

Other papers are in progress which partake of the character of original researches, since they are in part at least prepared at the expense and under the direction of the Smithsonian Institution. They will be mentioned under the next head.

In a few cases, memoirs have been presented which, though exhibiting research and considerable originality, are not of a character to warrant their adoption as parts of our volumes of Contributions to positive knowledge. The rule given in the programme has been rigidly adhered to, viz: to decline accepting any paper on physical science which consists merely of an unverified hypothesis, however ingenious and plausible such an hypothesis may be. A law of nature is not susceptible of a logical demonstration, like that of a proposition of geometry, but is proved by its fitness to explain old, and to predict new, phenomena. The verification of an hypothesis, as we have stated in the last report, consists in deducing consequences from it, and ascertaining by a direct appeal to observation or experiment, the truth or falsity of these deductions. Any paper, therefore, on material science which does not contain original experiments and observations cannot be admitted as a part of the Contributions to Knowledge. The rule we have adopted is in accordance with the practice of cautious investigators. The law of universal gravitation existed for several years in the mind of Newton as a well conditioned hypothesis, before it was given to the world as a verified and established theory. Besides this, the rules of logic which are employed in discussing the questions of ordinary life are not applicable to the precision of scientific inquiry. The materials in this case, to borrow an expression of an author of celebrity, "must be weighed in the scale of the assayer, and not like the mixed commodities of the market, on the weightbridge of common opinion and general usage."

It has been objected to our publishing original memoirs, that in so doing we are merely performing the duties of a learned society. The answer is, that the learned societies in this country have not the means, except in a very limited degree, of publishing memoirs which require expensive illustrations, much less of assisting to defray the cost of the investigations by which the results have been obtained. The real workingmen in the line of original research hail this part of the plan as a new era in the history of American science. The assistance which the Institution will thus render to original research, will occupy the place of the governmental patronage of other countries, and will enable true genius, wherever found, to place its productions before the world, free of cost, and in a manner most favorable for securing due attention and proper appreciation.

From our experience thus far, I am convinced that circumscribed as is the class of memoirs accepted by the Institution, we shall have no want of materials to fill at least one quarto volume a year. There has been in our country within the last few years a remarkable increase in the attention given to original research, not only in material science, but in every branch of knowledge susceptible of increase. And this is evinced by the character and variety of the papers which have been presented for publication. The wide difference between the increase of knowledge and its diffusion is beginning to be seen and appreciated, and the time is not far distant when we shall be as distinguished for our additions to science as for its diffusion and application. The revolutions of Europe are not only sending to our shores the choicest specimens of art, but also men of reputation and skill in scientific investigation. Besides this, the present state of France is attended with such an interruption of the ordinary means of scientific publication, that the manuscript volumes on natural history of one of the most distinguished professors of the Jardin des Plantes are offered to us for publication in the Smithsonian Contributions for no remuneration, save a few copies for distribution among friends. Were the Institution fully in operation I should not hesitate, in accordance with the liberality which should characterise an establishment founded on the bequest of a foreigner, to recommend the adoption of these memoirs for publication at the expense of the institution, and perhaps we might now distribute them through several of our volumes and finish the publication of them in the course of a few years.

Original researches.

The second part of the plan consists in instituting original researches, the results of which are to be published, with the other memoirs, in the volumes of the Smithsonian Contributions. Under this head may be first mentioned the publication of the tables ordered at the last meeting of the board, for facilitating the calculation of the time of appearance of occultations of the fixed stars by the moon. The object of these tables is to assist in the accurate determination of the longitude of important places on the continent of North America, and their importance has been attested by the recommendation of some of the most distinguished astronomers of this country. The accurate establishment of the longitude of any place renders it a landmark to the surveyor, the geographer and the astronomer, and furnishes a most important element in determining its relative position on the map of the country. The observation of occultations affords one of the most ready means of solving this most difficult practical problem. The tables were calculated at the expense and under the direction of the Institution, and were sent to all persons known to be interested in practical astronomy, with a request that the observations which might be made in connexion with them might be sent to the Institution for computation, or published in some accessible journal. These tables have been so well received by astronomers, that with the concurrence of the Executive Committee, I have ventured to order the computation of a set of the same kind on a more extensive scale for the year 1849. Copies of these will be sent to United States officers on the coast of Oregon and California, and will be distributed among all the other observers in this country. They will be found of much practical importance to the corps engaged by the general government in establishing the boundary lines of our new possessions. It is hoped that the remuneration allowed for the labor of computing these tables will not be considered extravagant, when it is mentioned that it has occupied the whole time of Mr. Downes for nearly six months, at the rate of eight hours a day.

With the concurrence of the Executive Committee, I have also published an ephemeris of the planet Neptune, or in other words, a table indicating its position in the heavens during each day of the present year, by which those interested in astronomy are enabled readily to find the place of the new planet in the heavens, or the direction in which the telescope must be pointed in order to observe it. Copies of this have been sent to all the principal astronomers in the world, and it has received the highest commendation. It was calculated by Mr. S. C. Walker from the orbit deduced by himself, a full account of which forms one of the papers of the second volume of the Contributions. It is the first accurate ephemeris which has ever appeared of this newly-discovered member of our solar system.

An appropriation of one thousand dollars was made at the last meeting of the board for the commencement of a series of meteorological observations, particularly with reference to the phenomena of American storms. According to the estimate of Prof. Loomis, appended to my last report, three thousand dollars will be required for the purpose of reducing this part of our plan to practice. It is hoped that one thousand dollars in addition will be appropriated this year, and an equal sum the next, so that, at the end of that time, we shall be prepared for full operation. At the last session of Congress an appropriation was made for meteorology under the direction of the Secretary of the Navy, and in order that the observations thus established may not interfere with those undertaken by the Smithsonian Institution, that officer has directed Prof. Espy to co-operate with the Secretary of the Institution.

It is contemplated to establish three classes of observers among those who are disposed to join in this enterprise. One class, without instruments, to observe the face of the sky as to its clearness, the extent of cloud, the direction and force of wind, the beginning and ending of rain, snow, &c. A second class, furnished with thermometers, who, besides making the observations above mentioned, will record variations of temperature. The third class, furnished with full sets of instruments, to observe all the elements at present deemed important in the science of meteorology. It is believed that much valuable information may be obtained in this way with reference to the extent, duration, and passage of storms over the country, though the observer may be possessed of no other apparatus than a simple wind vane.

With the instruments owned by private individuals, with those at the several military stations, and with the supply of the deficiency by the funds of the Smithsonian Institution, it is believed that observations can be instituted at important points over the whole United States, and that with the observations which we can procure from Mexico and the British possessions of North America, data will be furnished for important additions to our knowledge of meteorological phenomena. As a beginning to this extended system, six sets of instruments have been forwarded to the coast of Oregon and California, for the purpose of establishing periodical observations on the western side of the Rocky mountains. Also, a set has been forwarded to Bent's Fort, and another to Santa Fe. Circulars have been prepared and will shortly be issued for the purpose of ascertaining the number and locality of all those who, with or without instruments, are willing to join in the enterprise. I am indebted to Prof. Coffin, of Lafayette College, for a list of all persons, as far as they are known, who have heretofore been accustomed to make meteorological observations in North America, which will be of much importance in our future investigations relative to this subject.

As a part of the system of meteorology, it is proposed to employ, as far as our funds will permit, the magnetic telegraph in the investigation of atmospherical phenomena. By this means, not only the notice of the approach of a storm may be given to distant observers, but also the attention may be directed to particular phenomena, which can only be properly studied by the simultaneous observations of persons widely separated from each other. For example, the several phases presented by a thunder-storm, or by the aurora borealis, may be telegraphed to a distance, and the synchronous appearances compared, and recorded in stations far reremoved from each other. Also, by the same means, a single observatory at which constant observations are made during the whole 24 hours, may give notice to all persons along the telegraphic lines, of the occurrence of interesting meteorological phenomena, and thus simultaneous observations be secured. The advantage to agriculture and commerce to be derived from a knowledge of the approach of a storm by means of the telegraph, has been frequently referred to of late in the public journals. And this, we think, is a subject deserving the attention of the general government.

Under the head of researches, I may mention that several papers are in preparation, under the direction and partly at the expense of the Institution. The first of these relates to a series of valuable observations on the temperature and velocity of the Gulf stream, the author of which the science of our country was called to mourn while he was engaged in an important public service. The observations are now in progress of reduction, and the results will furnish an interesting memoir for the next volume of our Contributions.

The drawings and engravings of a paper on the botany of Oregon are also in progress, and as a small advance has been made to assist in completing these, the memoir will fall under the head of original researches, in part conducted by the Institution.

In the last report, it was mentioned that a magnetic survey of the mineral regions of the northern lakes had been added to the geological and mineralogical survey, the results of which were to be submitted to the Smithsonian Institution. An appropriation was made by the Secretary of the Treasury during the past summer for a continuation of this survey; but on account of the lateness of the season at which the arrangement was made, the person to whom the work was entrusted, was not enabled to engage in it this year. Operations, however, will probably be commenced as soon as practicable, next spring.

There is in the Land Office a large collection of facts relative to the variation of the compass, which have been derived from the observations of the public surveyors, who are directed in all cases to give the variation of the needle, from the true meridian, at the several stations of their surveys. The observations are made with an instrument called the solar compass, which probably gives the variation at each place within a quarter of a degree of the truth. The number of these observations, it is believed, will make up in a considerable degree for their want of greater precision, and from the whole, the lines of declination may be determined with considerable accuracy. The Secretary of the Treasury has liberally directed that all the matter relating to this subject in the land office may be placed at my disposal, and Mr. Wilson has undertaken to present the whole in a series of maps, the publication of which in the Contributions, cannot fail to be received as an interesting addition to terrestial magnetism.

Among the objects of research enumerated in the programme, is the analysis of soils and plants; but it is the policy of the Smithsonian Institution, in order to employ its funds most effectually in the way of increasing and diffusing knowledge, not to engage in any operation which could be as well if not better carried on under the direction and with the funds of another institution. In accordance with this, an arrangement has been made with the Commissioner of Patents that the two institutions may not interfere with each other; and as, at the request of Mr. Burke, an appropriation has been made by Congress for a series of experiments on the above-mentioned subjects, the Smithsonian Institution will, therefore, for the present abandon this field of research for others less effectually occupied.

I may also mention in this connexion, that the Smithsonian Institution has been the means of starting an important literary enterprise, intended to facilitate the study of the history and literature of our country. Mr. Henry Stevens, who has been engaged for a number of years as the agent in this country of the British Museum, and other European libraries, has commenced the preparation of a bibliographical work, comprising a description of all books relative to, or published in America prior to the year 1700, and indicating not only the contents and value of the books, but also the principal libraries in this and other countries where they are to be found. The preparation of a work of this kind will be in accordance with that part of our plan which contemplates rendering the Institution a centre of bibliographical knowledge, and will have a direct influence in promoting the objects of the various historical societies which are now established in almost every State of the Union, and in bringing the Institution into friendly relations with them. A certificate has been given to Mr. Stevens to the effect that this work, if found, by a commission to whom it shall be referred, properly executed, will be accepted for publication as part of the Smithsonian Contributions to Knowledge. Assured by this certificate that the work will be properly executed, a number of gentlemen and institutions, whose libraries will be examined and referred to, have liberally subscribed to defray the necessary expense of its preparation. With with this encouragement, Mr. Stevens has started for Europe to commence investigations in foreign libraries. To satisfy ourselves as to the importance of a work of this kind, a circular letter was addressed to a number of individuals distinguished for their knowledge of such subjects, and the answer in all cases was highly favorable to the scheme. Some of these answers I have given in the appendix, together with the details of the plan of the work as proposed by Mr. Stevens.—(See appendix A.)

At the last session of Congress an appropriation of $5,000 was made, on motion of Mr. Stanton, for a series of astronomical observations in the southern hemisphere for the purpose of a new determination of the parallax of the planets, and consequently of their distance from the sun by simultaneous observations on the planets Venus and Mars, made at places situated north and south of the equator. This appropriation has been found inadequate to furnish all the instruments required, and inasmuch as the expedition should not be undertaken unless the observers are provided with all the aids which the latest improvements in modern science can furnish, and since, to wait for an additional appropriation from Congress would cause the delay of a whole year, Lieut. Gilliss has applied to the Institution to purchase and lend to him an achromaticte lescope, which, if not paid for by an additional appropriation from the government, will, after its return from the south, form part of the apparatus of the Institution. This instrument will cost about $2,000, to be paid at the end of three years. The Executive Committee, to whom I applied for counsel on this subject, agreed with me in opinion, that this was a proper occasion for the application of the funds of the Institution to the promotion of science. The instrument has accordingly been ordered to be constructed by an American artist, and to be accepted only in case its performance shall meet the approval of a commission of practical astronomers appointed to examine it.

The position on the coast of Chili to be occupied by the southern observers, is peculiarly favorable to the study of the facts connected with one of the most mysterious and interesting phenomena of terrestrial physics—namely, the earthquake. Lieut. Gilliss has been requested to give particular attention to this subject, and for the purpose of facilitating his inquires a pseismometer, or instrument for measuring the intensity and direction of the *earthwave*, has been ordered at the expense of the Institution, to be placed in charge of the expedition during its absence. The cost of this instrument is not yet ascertained; it will, however, not exceed one hundred and fifty dollars.

I think it highly probable that these instruments will be paid for by the general government. The liberal spirit which dictated the original appropriation will, I doubt not, complete the outfit by the addition of a sum sufficient to defray all the necessary expenses.*

Under the head of original researches, I may recall to the Regents the fact of my having been directed to continue my own investigations on physical science, and to report occasionally to the Board my progress therein. In the course of last year, I found an opportunity while at Princeton, to commence a series of investigations on radiant heat, which apparently produced some results of interest, but which my subsequent engagements have prevented me from fully developing. I was also directed to cause to be made a series of experiments on the economical value of building material. It will give me much pleasure to obey this instruction of the Board as soon as a place in the Smithsonian building and the necessary apparatus are procured for properly conducting the research.

Reports on the progress af knowledge.

The Smithsonian Contributions are intended to consist of entirely original additions to the sum of human knowledge, and are to be principally exchanged for the transactions of learned societies, and to be distributed among public institutions. The reports, on the other hand, are to be of a more popular kind, and are intended for as wide a distribution as the funds of the Institution or the means of publishing them may permit. They will give an account of the progress of the different branches of knowledge in every part of the world, and will supply a desideratum in English literature.

The objects of the Smithsonian Institution are not educational. The press in our country already teems with elementary works on the different branches of knowledge, and to expend our funds in adding to these, would be to dissipate them without perceptible effect. Neither do we believe that the distribution of penny magazines, or tracts on the rudiments of science, can ever supersede the labors of the school-master. As a general rule, knowledge presented in a fragmentary form, can only be useful to minds well stored with general principles, to which the isolated facts may be referred, and knowledge, both fragmentary and diluted, is almost worthless, even in the way of popular distribution. The elementary principles of science may be systematically taught to a certain extent in common schools, and the reports we intend to publish will be found of value to the teacher, and through him to the pupil, as well as interesting to the general reader. While these reports are rendered as free as possible from technical terms, they will treat of subjects requiring attention and thought to understand them. We think it better that they should be above, rather than below the average intelligence of the country; that they should start from a given epoch, and in most cases should be preceded by a brief exposition of the previous state of each subject.

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* Since writing this report, the appropriation has been made by Congress.

Arrangements have been made for commencing some of these preliminary reports, as well as reports on the state of our knowledge of special subjects; among these are—

1. A report on the present state of chemistry as applied to agriculture.
2. A report on the forest trees of North America, giving their economical uses, their mode of propagation, and their history.
3. A report on the present state of our knowledge of lightning, and the best means of guarding against accidents from its effects.
4. A report on the late discoveries in astronomy.
5. A report on meteorological instruments, with practical observations and directions with reference to the use of them.

In connexion with this last report, I may mention that a proposition has been made to the Institution by Prof. Guyot, of the University of Neufchatel, relative to the importance of commencing at this epoch, and at the beginning of the labors of the Smithsonian Institution, the adoption of the centigrade scale of the thermometer. This is a subject, indeed, worthy of the attention of the Regents. It should, however, be discussed with caution, and be decided only after due deliberation.—(See appendix C.)

The first idea of reports on the progress of knowledge, with which we are acquainted, is due to the Emperor Napoleon, who called upon the French Academy of Science to present him with accounts of the progress of the different branches of knowledge within a given period. Until within the last few years the only regular reports of the kind were those presented to the Swedish Academy. Since that time, however, a series of annual reports on chemistry have been commenced by an association of gentlemen in France, and also a series on the different branches of material science, by the Physical Society of Berlin. The several numbers of the latter are now in progress of translation, in order to furnish in part the materials for the reports, to be prepared for the Smithsonian Institution during the coming year.

Although comparatively little has been done in our country in the way of original research, yet it might be important that the Institution should call for the preparation of a report on the history of the progress of original science in America down to the end of the present half century. This report would exhibit a constant increase in the number and importance of the researches made in our country, and might be found of much service in giving due credit to the labors of those who have been really engaged in the advance of knowledge among us. A report of this kind, however, would require the association of a number of persons combining literary with scientific attainments.

Occasional publication of separate treatises on subjects of general interest.

This part of the plan of organization requires to be carried into operation with much caution. It is liable to much abuse, unless the publication be confined to a narrow class of subjects, viz : to scientific reports on the present state of knowledge of a given subject, to precede the periodical reports, to translations from foreign languages of papers of general interest, and occasionally, perhaps, the exposition of a subject on which, at a particular time, popular knowledge is required. We should be careful not to establish a precedent which may lead us into difficulty, in the way of declining the publication of works which may be presented to us. Scarcely a week passes in which the Institution is not requested to publish some essay or compilation, and the funds which can be devoted to all our publications would not suffice for one-half of those offered of this kind. The only work of this class which has yet been attempted by the Institution, is one entitled "Hints on Public Architecture," under the direction of the Building Committee. Although the Secretary's name was mentioned in the resolution authorizing the publication of this treatise, yet he has thus far had no connexion with it. The publication was authorized before the details of the plan of organization were fully settled. It was at first intended merely as a report of the Building Committee, giving an account of the plans submitted, and the one adopted for the Smithsonian building, together with a report of the investigations of the committee with regard to the materials of construction, &c. It was afterwards changed into the form of a regular treatise in order that it might be referred to a commission of persons chosen to examine it, and that the Institution might thus be relieved from the responsibility of pronouncing upon its fitness for publication. I think it important that besides the preface of this work, a full account of its origin should be given in an introductory advertisement.

Library.

During the past year the library has continued to increase by donations, and by the books which have been deposited by publishers, in accordance with the 10th section of the Act establishing the Institution. The requirements of this Act are, however, not strictly observed by all publishers; and I would direct the attention of the board to a special report of the Assistant Secretary with reference to the point. The whole subject will probably come before Congress during its present session.

Prof. Jewett, the Assistant Secretary, has been industriously engaged during the past year in procuring statistics of the libraries in the United States, and in digesting plans for the details of the library of the institution, and I beg leave to refer you to the able and interesting report of the results of his labors, herewith submitted. A considerable portion of the copies of the Smithsonian Contributions will be presented to public institutions which publish transactions, and which are able to present us in return with additions to our library. The volume now in process of distribution has been preceded by a circular requesting exchanges of the works of all institutions which issue transactions and catalogues of all libraries to which the Contributions may be sent.

Preparation for lecturing.

The plan of organization contemplates a series of free lectures, particularly during the session of Congress. These will be commenced as soon as the building is ready for the purpose. This part of the plan also cannot be put into full operation until after the building is completed. A number of gentlemen have consented to favor us with their services. Men of talents, however, cannot be expected to leave their homes and subject themselves to the expense of visiting Washington, and to the trouble of preparing for a course of lectures without a proper remuneration. It will be necessary, therefore, that an annual appropriation be made for this purpose. The amount, however, must necessarily be small until the building is completed, or until all the interest of the fund can be devoted to the primary objects of the Institution. Besides this, the lecture-room in the east wing, now finished, will scarcely hold more than five hundred persons, while the one in the main building is intended to accommodate twice as many.

Donation.

Dr. Robert Hare, of Philadelphia, having resigned the chair of chemistry in the University of Pennsylvania, which he had filled with honor to himself and his country for nearly thirty years, has presented to the Smithsonian Institution the instruments of research and illustration, collected and used by himself during his long and successful scientific career. Many of these instruments are the invention of the donor, are connected with his reputation, and belong to the history of the science of our day. The gift is important, not only on account of its intrinsic value, but also as establishing a precedent of liberality, which we trust will be frequently observed by others, as well as being an expression of Dr. Hare's approbation of the plan and confidence in the stability of the Institution A number of other donations have been received, of which a list, with the names of the donors, will be given in the next report.

In view of what has been stated in the foregoing report, the Secretary trusts that the Board of Regents will be satisfied, if ever they had any doubts on the subject, that the plan adopted is one well calculated to carry out the benevolent intentions of the donor, of increasing and diffusing knowledge among men; and that a satisfactory answer has been given to the question frequently asked, namely, when is the Institution to begin? It will be seen that it has commenced the most important part of its operations, and the results are now in progress of dissemination in every part of the civilized world.

For convenience of reference, I have appended for republication the programme and its explanations, given in my last annual report.

Respectfully submitted,

JOSEPH HENRY,
Secretary of the Smithsonian Institution.

Programme of organization of the Smithsonian Institution, presented in the first Annual Report of the Secretary and adopted by the Board of Regents, December 13, 1847.

GENERAL CONSIDERATIONS WHICH SHOULD SERVE AS A GUIDE IN ADOPTING A PLAN OF ORGANIZATION.

1. WILL OF SMITHSON. The property is bequeathed to the United States of America, "to found at Washington, under the name of the Smithsonian Institution, an establishment for the increase and diffusion of knowledge among men."

2. The bequest is for the benefit of mankind. The government of the United States is merely a trustee to carry out the design of the testator.

3. The Institution is not a national establishment, as is frequently supposed, but the establishment of an individual, and is to bear and perpetuate his name.

4. The objects of the Institution are—1st, to increase, and 2d, to diffuse knowledge among men.

5. These two objects should not be confounded with one another. The first is to increase the existing stock of knowledge by the addition of new truths; and the second to disseminate knowledge, thus increased, among men.

6. The will makes no restriction in favor of any particular kind of knowledge; hence all branches are entitled to a share of attention.

7. Knowledge can be increased by different methods of facilitating and promoting the discovery of new truths, and can be most efficiently diffused among men by means of the press.

8. To effect the greatest amount of good, the organization should be such as to enable the Institution to produce results in the way of increasing and diffusing knowledge, which cannot be produced by the existing institutions in our country.

9. The organization should also be such as can be adopted provisionally, can be easily reduced to practice, receive modifications, or be abandoned, in whole or in part, without a sacrifice of the funds.

10. In order to make up for the loss of time occasioned by the delay of eight years in establishing the Institution, a considerable portion of the interest which has accrued should be added to the principal.

11. In proportion to the wide field of knowledge to be cultivated, the funds are small. Economy should therefore be consulted in the construction of the building; and not only should the first cost of the edifice be considered, but also the continual expense of keeping it in repair, and of the support of the establishment necessarily connected with it. There should also be but few individuals permanently supported by the Institution.

12. The plan and dimensions of the building should be determined by the plan of organization, and not the converse.

13. It should be recollected that mankind in general are to be benefited by the bequest, and that, therefore, all unnecessary expenditure on local objects would be a perversion of the trust.

14. Besides the foregoing considerations, deduced immediately from the will of Smithson, regard must be had to certain requirements of the act of Congress establishing the Institution. These are a library, a museum, and a gallery of art, with a building on a liberal scale to contain them.

SECTION I.

Plan of organization of the institution, in accordance with the foregoing deductions from the will of Smithson.

To INCREASE KNOWLEDGE. It is proposed—

1. To stimulate men of talent to make original researches, by offering suitable rewards for memoirs containing new truths; and,

2. To appropriate annually a portion of the income for particular researches, under the direction of suitable persons.

To DIFFUSE KNOWLEDGE. It is proposed—

1. To publish a series of periodical reports on the progress of the different branches of knowledge; and,

2. To publish occasionally separate treatises on subjects of general interest.

DETAILS OF THE PLAN TO INCREASE KNOWLEDGE.

I. *By stimulating researches.*

1. Rewards, consisting of money, medals, &c., offered for original memoirs on all branches of knowledge.

2. The memoirs thus obtained to be published in a series of volumes, in a quarto form, and entitled "Smithsonian Contributions to Knowledge."

3. No memoir, on subjects of physical science, to be accepted for publication, which does not furnish a positive addition to human knowledge resting on original research; and all unverified speculations to be rejected.

4. Each memoir presented to the Institution to be submitted for examination to a commission of persons of reputation for learning in the branch to which the memoir pertains, and to be accepted for publication only in case the report of this commission is favorable.

5. The commission to be chosen by the officers of the Institution, and the name of the author, as far as practicable, concealed, unless a favorable decision be made.

6. The volumes of the memoirs to be exchanged for the transactions of literary and scientific societies, and copies to be given to all the colleges and principal libraries in this country. One part of the remaining copies may be offered for sale, and the other carefully preserved, to form complete sets of the volume, to supply the demand from new institutions.

7. An abstract, or popular account, of the contents of these memoirs to be given to the public through the annual report of the Regents to Congress.

II. *By appropriating a portion of the income, annually, to special objects of research, under the direction of suitable persons.*

1. The objects, and the amount appropriated, to be recommended by counsellors of the Institution.

2. Appropriations in different years to different objects; so that in course of time, each branch of knowledge may receive a share.

3. The results obtained from these appropriations to be published, with the memoirs before mentioned, in the volumes of the Smithsonian Contributions to Knowledge.

4. Examples of objects for which appropriations may be made.

(1.) System of extended meteorological observations, particularly with reference to the phenomena of American storms.

(2.) Explorations in descriptive natural history, and geological, magnetical, and topographical surveys, to collect materials for the formation of a Physical Atlas of the United States.

(3.) Solution of experimental problems, such as a new determination of the weight of the earth, of the velocity of electricity, and of light; chemical analyses of soils and plants; collection and publication of articles of science, accumulated in the offices of government.

(4.) Institution of statistical inquiries with reference to physical, moral, and political subjects.

(5.) Historical researches, and accurate surveys of places celebrated in American history.

(6.) Ethnological researches, particularly with reference to the different races of men in North America; also explorations and accurate surveys of the mounds and other remains of the ancient people of our country.

DETAILS OF THE PLAN FOR DIFFUSING KNOWLEDGE.

I. *By the publication of a series of reports, giving an account of the new discoveries in science, and of the changes made from year to year in all branches of knowledge not strictly professional.*

1. These reports will diffuse a kind of knowledge generally interesting, but which, at present, is inaccessible to the public. Some of the reports may be published annually, others at longer intervals, as the income of the Institution, or the changes in the branches of knowledge may indicate.

2. The reports are to be prepared by collaborators, eminent in the different branches of knowledge.

3. Each collaborator to be furnished with the journals and publications, domestic and foreign, necessary to the compilation of his report, to be paid a certain sum for his labors, and to be named on the title-page of the report.

(4.) The reports to be published in separate parts, so that persons interested in a particular branch can procure the parts relating to it, without purchasing the whole.

(5.) These reports may be presented to Congress, for partial distribution; the remaining copies to be given to literary and scientific institutions, and sold to individuals for a moderate price.

The following are some of the subjects which may be embraced in the reports.

I. PHYSICAL CLASS.

1. Physics, including astronomy, natural philosophy, chemistry, and meteorology.
2. Natural history, including botany, zoology, geology, &c.
3. Agriculture.
4. Application of science to arts.

II. MORAL AND POLITICAL CLASS.

5. Ethnology, including particular history, comparative philology, antiquities, &c.

6. Statistics and political economy.
7. Mental and moral philosophy.
8. A survey of the political events of the world, penal reform, &c.

III. LITERATURE AND THE FINE ARTS.

9. Modern literature.
10. The fine arts, and their application to the useful arts.
11. Bibliography.
12. Obituary notices of distinguished individuals.

II. *By the publication of separate treatises on subjects of general interest.*

1. These treatises may occasionally consist of valuable memoirs, translated from foreign languages, or of articles prepared under the direction of the Institution, or procured by offering premiums for the best exposition of a given subject.

2. The treatises should in all cases be submitted to a commission of competent judges previous to their publication.

3. As examples of these treatises, expositions may be obtained of the present state of the several branches of knowledge mentioned in the table of reports. Also of the following subjects, suggested by the Committee on Organization, viz: the statistics of labor, the productive arts of life, public instruction, &c.

SECTION II.

Plan of organization, in accordance with the terms of the resolutions of the Board of Regents, providing for the two modes of increasing and diffusing knowledge.

1. The act of Congress establishing the Institution contemplated the formation of a library and a museum; and the Board of Regents, including these objects in the plan of organization, resolved to divide the income into two equal parts.

2. One part to be appropriated to increase and diffuse knowledge by means of publications and researches, agreeably to the scheme before given. The other part to be appropriated to the formation of a library and a collection of objects of nature and of art.

3. These two plans are not incompatible with one another.

4. To carry out the plan before described, a library will be required, consisting, 1st, of a complete collection of the transactions and proceedings of all the learned societies in the world; 2d, of the more important current periodical publications, and other works necessary in preparing the periodical reports.

5. The Institution should make special collections, particularly of objects to verify its own publications.

6. Also a collection of instruments of research in all branches of experimental science.

7. With reference to the collection of books, other than those mentioned above, catalogues of all the different libraries in the United States should be procured, in order that the valuable books first purchased may be such as are not to be found in the United States.

8. Also catalogues of memoirs, and of books in foreign libraries, and other materials, should be collected for rendering the institution a centre of bibliographical knowledge, whence the student may be directed to any work which he may require.

9. It is believed that the collections in natural history will increase by donation, as rapidly as the income of the Institution can make provision for their reception, and therefore it will seldom be necessary to purchase any articles of this kind.

10. Attempts should be made to procure for the gallery of arts casts of the most celebrated articles of ancient and modern sculpture.

11. The arts may be encouraged by providing a room, free of expense, for the exhibition of the objects of the Art Union and other similar societies.

12. A small appropriation should annually be made for models of antiquities, such as those of the remains of ancient temples, &c.

13. For the present, or until the building is fully completed, besides the Secretary, no permanent assistant will be required, except one, to act as librarian.

14. The duty of the Secretary will be the general superintendence, with the advice of the Chancellor and other members of the establishment, of the literary and scientific operations of the institution; to give to the Regents annually an account of all the transactions; of the memoirs which have been received for publication; of the researches which have been made; and to edit, with the assistance of the librarian, the publications of the Institution.

15. The duty of the Assistant Secretary, acting as librarian, will be, for the present, to assist in taking charge of the collections, to select and purchase, under the direction of the Secretary and a committee of the board, books and catalogues, and to procure the information before mentioned; to give information on plans of libraries, and to assist the Secretary in editing the publications of the Institution, and in the other duties of his office.

16. The Secretary and his assistants, during the session of Congress, will be required to illustrate new discoveries in science, and to exhibit new objects of art; also, distinguished individuals should be invited to give lectures on subjects of general interest.

17. When the building is completed, and when, in accordance with the act of Congress, the charge of the National Museum is given to the Smithsonian Institution, other assistants will be required.

Explanations and illustrations of the programme.

The programme embraces the general propositions adopted by the Board of Regents at their last meeting, as the basis of future operations. It is intended to harmonize the two modes of increasing and diffusing knowledge, and to give to the Institution the widest influence compatible with its limited income. That all the propositions will meet with general approval cannot be expected; and that this organization is the best that could be devised is neither asserted nor believed. To produce *a priori* a plan of organization which shall be found to succeed perfectly in practice, and require no amendment, would be difficult under the most favorable circumstances, and becomes almost impossible where conflicting opinions are to be harmonized, and the definite requirements of the act establishing the Institution are to be observed. It is not intended that the details of the organization, as given in the programme, should be permanently adopted without careful trial; they are rather presented as suggestions to be adopted provisionally, and to be carried into operation gradually and cautiously, with such changes, from time to time, as experience may dictate.

That the Institution is not a national establishment, in the sense in which institutions dependent on the government for support are so, must be evident when it is recollected that the money was not absolutely given to the United States, but intrusted to it for a special object, namely: the establishment of an institution for the benefit of men, to bear the name of the donor, and, consequently, to reflect upon his memory the honor of all the good which may be accomplished by means of the bequest. The operations of the Smithsonian Institution ought, therefore, to be mingled as little as possible with those of the government, and its funds should be applied exclusively and faithfully to the increase and diffusion of knowledge among men.

That the bequest is intended for the benefit of men in general, and that its influence ought not to be restricted to a single district, or even nation, may be inferred not only from the words of the will, but also from the character of Smithson himself; and I beg leave to quote from a scrap of paper in his own hand, the following sentiment bearing on this point: "The man of science has no country; the world is his country—all men, his countrymen." The origin of the funds, the bequest of a foreigner, should also preclude the adoption of a plan which does not, in the words of Mr. Adams, "spread the benefits to be derived from the Institution not only over the whole surface of this Union, but throughout the civilized world." "Mr. Smithson's reason for fixing the seat of his Institution at Washington obviously was, that *there* is the seat of government of the United States, and *there* the Congress by whose legislation, and the Executive through whose agency, the trust committed to the honor, intelligence, and good faith of the nation, is to be fulfilled." The centre of operations being permanently fixed at Washington, the character of this city for literature and science will be the more highly exalted in proportion as the influence of the Institution is more widely diffused.

That the terms *increase* and *diffusion* of knowledge are logically distinct, and should be literally interpreted with reference to the will, must be evident when we reflect that they are used in a definite sense, and not as mere synonymes, by all who are engaged in the pursuits to which Smithson devoted his life. In England there are two classes of institutions, founded on the two ideas conveyed by these terms. The Royal Society, the Astronomical, the Geological, the Statistical, the Antiquarian Societies, all have for their object the increase of knowledge; while the London Institution, the Mechanics' Institution, the Surry Institution, the Society for the Diffusion of Religious Knowledge, the Society for the Diffusion of Useful Knowledge, are all intended to diffuse or disseminate knowledge among men. In our own country, also, the same distinction is observed in the use of the terms by men of science. Our colleges, academies, and common schools, are recognized as institutions partially intended for the diffusion of knowledge, while the express object of some of our scientific societies is the promotion of the discovery of new truths.

The will makes no restriction in favor of any particular kind of knowledge; though propositions have been frequently made for devoting the funds exclusively to the promotion of certain branches of science having more immediate application to the practical arts of life, and the adoption of these propositions has been urged on the ground of the conformity of such objects to the pursuits of Smithson; but an examination of his writings will show that he excluded from his own studies no branch of general knowledge, and that he was fully impressed with the important philosophical fact, that all subjects of human thought relate to one great system of truth. To restrict, therefore, the operations of the institution to a single science or art, would do injustice to the character of the donor, as well as to the cause of general knowledge. If preference is to be given to any branches of research, it should be to the higher, and apparently more abstract; to the discovery of new principles, rather than of isolated facts. And this is true even in a practical point of view. Agriculture would have forever remained an empirical art, had it not been for the light shed upon it by the atomic theory of chemistry; and incomparably more is to be expected as to its future advancement from the perfection of the microscope, than from improvements in the ordinary instruments of husbandry.

The plan of increasing and diffusing knowledge, presented in the first section of the programme, will be found in strict accordance with the several propositions deduced from the will of Smithson, and given in the introduction. It embraces, as a leading feature, the design of interesting the greatest number of individuals in the operations of the Institution, and of spreading its influence as widely as possible. It forms an active organization, exciting all to make original researches who are gifted with the necessary power, and diffusing a kind of knowledge, now only accessible to the few, among all those who are willing to receive it. In this country, though many excel in the application of science to the practical arts of life, few devote themselves to the continued labor and patient thought necessary to the discovery and development of new truths. The principal cause of this want of attention to original research, is the want, not of proper means, but of proper encouragement. The publication of original memoirs and periodical reports, as contemplated by the programme, will act as a powerful stimulus on the latent talent of our country, by placing in bold relief the real laborers in the field of original research, while it will afford the best materials for the use of those engaged in the diffusion of knowledge.

The advantages which will accrue from the plan of publishing the volumes of the Smithsonian Contributions to Knowledge, are various. In the first place, it will serve to render the name of the founder favorably known wherever literature and science are cultivated, and to keep it in continual remembrance with each succeeding volume, as long as knowledge is valued. A single new truth, first given to the world through these volumes, will forever stamp their character as a work of reference. The contributions will thus form the most befitting monument to perpetuate the name of one whose life was devoted to the increase of knowledge, and whose ruling passion, strong in death, prompted the noble bequest intended to facilitate the labors of others in the same pursuit.

Again, the publication of a series of volumes of original memoirs will afford to the institution the most ready means of entering into friendly relations and correspondence with all the learned societies in the world, and of enriching its library with their current transactions and proceedings.

But perhaps the most important effect of the plan will be that of giving to the world many valuable memoirs, which, on account of the expense of the illustrations, could not be otherwise published. Every one who adds new and important truths to the existing stock of knowledge, must be of necessity, to a certain degree, in advance of his age. Hence the number of readers and purchasers of a work is generally in the inverse ratio of its intrinsic value; and consequently, authors of the highest rank of merit are frequently deterred from giving their productions to the world on account of the pecuniary loss to which the publication would subject them. When our lamented countryman, Bowditch, contemplated publishing his commentary on La Place, he assembled his family and informed them that the execution of this design would sacrifice one-third of his fortune, and that it was proper his heirs should be consulted on the subject which so nearly concerned them. The answer was worthy of the children of such a father: "We value," said they, "your reputation more than your money." Fortunately, in this instance, the means of making such a sacrifice existed; otherwise one of the proudest monuments of American science could not have been given to the world. In a majority of cases, however, those who are most capable of extending human knowledge are least able to incur the expense of the publication. Wilson, the American Ornithologist, states, in a letter to Michaux, that he has sacrificed everything to publish his work: "I have issued," he says, "six volumes, and am engaged on the seventh, but as yet I have not received a single cent of the proceeds." In an address on the subject of natural history, by one of our most active cultivators of this branch of knowledge, we find the following remarks, which are directly in point: "Few are acquainted with the fact that from the small number of scientific works sold, and the great expense of plates, our naturalists not only are not paid for their labors, but suffer pecuniary loss from their publications. Several works on different branches of zoology, now in course of publication, will leave their authors loses to an aggregate amount of $15,000. I do not include in this estimate works already finished—one, for instance, the best contribution to the natural history of man extant, the publication of which will occasion its accomplished author a loss of several thousand dollars. A naturalist is extremely fortunate if he can dispose of 200 copies of an illustrated work, and the number of copies printed rarely exceeds 250." It may be said that these authors have their reward in the reputation which they thus purchase; but reputation should be the result of the talents and labor expended in the production of a work, and should not in the least depend upon the fact that the author is able to make a pecuniary sacrifice in giving the account of his discoveries to the public.

Besides the advantage to the author of having his memoir published in the Smithsonian Contributions free of expense, his labors will be given to the world with the stamp of approval of a commission of learned men, and his merits will be generally made known through the reports of the institution. Though the premiums offered may be small, yet they will have considerable effect in producing original articles. Fifty or a hundred dollars awarded to the author of an original paper, will, in many instances, suffice to supply the books, or to pay for the materials, or the manual labor required, in prosecuting the research.

There is one proposition of the programme which has given rise to much discussion, and which, therefore, requires particular explanation; I allude to that which excludes from the contributions all papers consisting merely of unverified speculations on subjects of physical science. The object of this proposition is to obviate the endless difficulties which would occur in rejecting papers of an unphilosophical character; and though it may in some cases exclude an interesting communication, yet the strict observance of it will be found of so much practical importance that it cannot be dispensed with. It has been supposed, from the adoption of this proposition, that we are disposed to undervalue abstract speculations: on the contrary, we know that all the advances in true science—namely, a knowledge of the laws of phenomena—are made by provisionally adopting well-conditioned hypotheses, the product of the imagination, and subsequently verifying them by an appeal to experiment and observation. Every new hypothesis of scientific value must not only furnish an exact explanation of known facts, but must also enable us to predict, in kind and quantity, the phenomena which will be exhibited under any given combination of circumstances. Thus, in the case of the undulatory hypothesis of light, it was inferred, as a logical consequence, that if the supposition were true that light consisted of waves of an ethereal medium, then two rays of light, like two waves of water under certain conditions, should annihilate each other, and darkness be produced. The experiment was tried, and the anticipated result was obtained. It is this exact agreement of the deduction with the actual result of experience that constitutes the verification of an hypothesis, and which alone entitles it to the name of a theory, and to a place in the transactions of a scientific institution. It must be recollected that it is much easier to speculate than to investigate, and that very few of all the hypotheses imagined are capable of standing the test of scientific verification.

For the practical working of the plan for obtaining the character of a memoir, and the precaution taken before it is accepted for publication, I would refer* to the correspondence relative to the memoir now in process of publication by the institution. The memoir was referred to the American Ethnological Society, with a request that a committee of its members might be appointed to examine and report on its character, as to fitness for publication in the Smithsonian Contributions to Knowledge. On the favorable report of this committee, and on the responsibility of the society, the memoir was accepted for publication.

As it is not our intention to interfere with the proceedings of other institutions, but to co operate with them, so far as our respective operations are compatible, communications may be referred to learned societies for inspection, as in the case of the above mentioned memoir, and abstracts of them given to the world through the bulletins of these societies, while the details of the memoirs and their expensive illustrations are published in the volumes of the Smithsonian Contributions. The officers of several learned societies in this country have expressed a willingness to co-operate in this way.

Since original research is the most direct means of increasing knowledge, it can scarcely be doubted that a part of the income of the bequest should be appropriated to this purpose, provided suitable persons can be found, and their labors be directed to proper objects. The number, however, of those who are capable of discovering scientific principles is comparatively small; like the poet, they are "born, not made," and, like him, must be left to choose their own subject, and wait the fitting time of inspiration. In case a person of this class has fallen on a vein of discovery, and is pursuing it with success, the better plan will be to grant him a small sum of money to carry on his investigation, provided they are considered worthy of assistance by competent judges. This will have the double effect of encouraging him in the pursuit, and of facilitating his progress. The Institution, however, need not depend upon cases of this kind, even if they were more numerous than they are, for the application of its funds in the line of original research. There are large fields of observation and experiment, the cultivation of which, though it may afford no prospect of the discovery of a principle, can hardly fail to produce results of importance both in a practical and a theoretic point of view. As an illustration of this remark, I may mention the case of the investigations made a few years ago by committees of the Franklin Institute, of Philadelphia. The Secretary of the Treasury of the United States placed at the disposal of this society a sum of money, for the purpose of making experiments with reference to the cause of the explosion of steam-boilers. A committee of the society was chosen for this purpose, which adopted the ingenious plan of writing to all persons in the United States engaged in the application of steam, and particularly to those who had observed the explosion of a steam-boiler. In this way opinions and suggestions in great variety, as to the cause of explosions, were obtained. The most plausible of these were submitted to the test of experiment: the results obtained were highly important, and are to be found favorably mentioned in every systematic work on the subject of steam which has appeared, in any language, within the last few years. New and important facts were established; and, what was almost of as much consequence, errors which had usurped the place of truth were dethroned.

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* See first volume of the Smithsonian Contributions.

In the programme, examples are given of a few subjects of original research to which the attention of the Institution may be turned. I will mention one in this place, which, in connexion with the contents of our first memoir, may deserve immediate attention. I allude to a small appropriation made annually for researches with reference to the remains of the ancient inhabitants of our country. This is a highly interesting field, and what is done in regard to it should be done quickly. Every year the progress of civilization is obliterating the ancient mounds, cities and villages are rising on the spots they have so long occupied undisturbed, and the distinctive marks of these remains are every year becoming less and less legible.

In carrying out the spirit of the plan adopted, namely, that of affecting men in general by the operations of the Institution, it is evident that the principal means of diffusing knowledge must be the *press*. Though lectures should be given in the city in which Smithson has seen fit to direct the establishment of his Institution, yet, as a plan of general diffusion of knowledge, the system of lectures would be entirely inadequate; every village in our extended country would have a right to demand a share of the benefit, and the income of the institution would be insufficient to supply a thousandth part of the demand. It is also evident that the knowledge diffused should, if possible, not only embrace all branches of general interest, so that each reader might find a subject suited to his taste, but also that it should differ in kind and quality from that which can be readily obtained through the cheap publications of the day. These conditions will be fully complied with in the publications of the series of reports proposed in the programme. A series of periodicals of this kind, posting up all the discoveries in science from time to time, and giving a well digested account of all the important changes in the different branches of knowledge, is a desideratum in the English language. The idea is borrowed from a partial plan of this kind in operation in Sweden and Germany; and for an example of what the work should be, I would refer to the annual report to the Swedish Academy of its perpetual secretary, Berzelius, on physical science. The reports can be so prepared so as to be highly interesting to the general reader, and at the same time of great importance to the exclusive cultivator of a particular branch of knowledge. Full references should be given, in foot-notes, to the page, number or volume of the work from which the information was obtained, and where a more detailed account can be found. It is scarcely necessary to remark, that the preparation of these reports should be intrusted only to persons profoundly acquainted with the subjects to which they relate—namely, to those who are devoted to particular branches, while they possess a knowledge of general principles. Sufficient explanations should be introduced to render the report intelligible to the general reader, without destroying its scientific character. Occasionally reports may be obtained from abroad—as, for example, accounts of the progress of certain branches of knowledge in foreign countries—and these may be translated, if necessary, and incorporated into other reports, by some competent person in this country.

Besides the reports on the progress of knowledge, the programme proposes to publish occasionally brief treatises on particular subjects. There are always subjects of general interest, of which brief expositions would be of much value. The preparation of these, however, should be intrusted to none but persons of character and reputation, and should be subjected to a revision by competent and responsible judges before they are given to the public. They may be presented in the form of reports on the existing state of knowledge relative to a given subject, and may sometimes consist of memoirs and expositions of particular branches of literature and science, translated from foreign languages. The reports and treatises of the institution, sold at a price barely sufficient to pay the expense of printing, will find their way into every school in our country, and will be used not as first lessons for the pupil, but as sources of reliable information for the teacher.

The second section of the programme gives, so far as they have been made out, the details of the part of the plan of organization directed by the act of Congress establishing the Institution. The two plans, namely, that of publication and original research, and that of collections of objects of nature and art, are not incompatible, and may be carried on harmoniously with each other. The only effect which they will have on one another is that of limiting the operation of each, on account of the funds given to the other. Still, with a judicious application, and an economical expenditure of the income, and particularly by rigidly observing the plan of finance, suggested by Dr. Bache, in the construction of the building, much good may be effected in each of the two branches of the institution. To carry on the operations of the first, a working library will be required, consisting of the past volumes of the transactions and proceedings of all the learned societies in every language. These are the original sources from which the most important principles of the positive knowledge of our day have been drawn. We shall also require a collection of the most important current literature and science for the use of the collaborators of the reports; most of these, however, will be procured in exchange for the publications of the Institution, and therefore will draw but little from the library fund. For other suggestions relative to the details of the library, I would refer to the report of the assistant secretary, acting as librarian.

The collections of the Institution, as far as possible, should consist of such articles as are not elsewhere to be found in this country, so that the visitors at Washington may see new objects, and the spirit of the plan be kept up, of interesting the greatest possible number of individuals. A general collection of all objects of nature and of art properly arranged and deposited in one place, would form a museum of the highest interest; but the portion of the income of the bequest which can be devoted to the increase and maintenance of the museum, will be too small to warrant any attempt towards an indiscriminate collection. It is hoped that in due time other means may be found of establishing and supporting a general collection of objects of nature and art at the seat of the general government, with funds not derived from the Smithsonian bequest. For the present, it should be the object of the Institution to confine the application of the funds, first, to such collections as will tend to facilitate the study of the memoirs which may be published in the Contributions, and to establish their correctness; secondly, to the purchase of such objects as are not generally known in this country, in the way of art, and the illustration of antiquities, such as models of buildings, &c.; and thirdly, to the formation of a collection of instruments of physical research, which will be required both in the illustration of new physical truths, and in the scientific investigations undertaken by the institution.

Much popular interest may be awakened in favor of the institution at Washington, by throwing the rooms of the building open, on stated evenings during the session of Congress, for literary and scientific assemblies, after the manner of the weekly meetings of the Royal Institution in London. At these meetings, without the formality of a regular lecture, new truth in science may be illustrated, and new objects of art exhibited. Besides these, courses of lectures may be given on particular subjects by the officers of the Institution, or by distinguished individuals invited for the purpose.

Respectfully submitted.

JOSEPH HENRY,
Secretary of the Smithsonian Institution.

REPORT OF THE ASSISTANT SECRETARY RELATIVE TO THE LIBRARY—PRESENTED DECEMBER 13, 1848.

To the Secretary of the Smithsonian Institution:

Sir: At the last meeting of the Board of Regents the following duties were assigned to me for the year which is about to close, viz:

1. "The preparation of catalogues of books suitable for the commencement of the library, in accordance with the plan of organization adopted by the Board of Regents.

2. "The purchase of the more necessary works on bibliography.

3. "The collection and systematic arrangement for purposes of comparison of the printed catalogues of the principal libraries throughout the United States, together with information with regard to the expenditures, plans of increase, and other particulars relating to said libraries.

4. "The collection of works to which the institution may be entitled under the tenth section of the act establishing the Institution."

The first of these duties which demanded my attention after the adjournment of the Board of Regents, was the collection of the works to which the institution is entitled by the tenth section of the charter. After examining the subject carefully, I made a special report thereon to the Secretary and Library Committee, a copy of which is herewith submitted.

The next subject to which I devoted my attention was the gathering of information respecting public libraries in the United States. It is a singular, and to us a mortifying fact, that the most accurate account of American libraries was published in Germany, and has never been translated into English. In 1845,–'6 there appeared in the "Serapeum,*" a journal published at Leipzig, a series of articles upon bibliography and libraries in the United States. These articles, forming about ninety pages octavo, were written by Hermann E. Ludewig, formerly of Dresden, at present a lawyer in the city of New York. Having a strong predilection for bibliographical pursuits, he collected, during a journey which he performed through the United States, all the information within his reach respecting the libraries, public and private, the book trade, and the bibliography of the general and local history of the country. The results of his researches have been given to the public in the articles to which I have already referred, and in an 8vo. volume of 180 pages, published for private distribution, entitled "The Literature of American Local History; a Bibliographical Essay; New York, 1846." The fullness and accuracy of the details which he has given are remarkable. I have made free use of them, and have found my labors much facilitated by so doing.

I have, besides, visited and examined many of the principal libraries. I have also prepared, for the purpose of eliciting further information, a circular letter to librarians, a copy of which accompanies this report. This letter was distributed together with the first volume of our "Contributions to Knowledge." I regret that the answers to the queries have not all been received, so that I am unable at present to offer a full report respecting them. The most important statistics have, however, been obtained. These are presented in an accompanying document. I beg leave here to offer some important deductions from the facts contained in this paper.

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* Serapeum. Zeitschrift für Bibliothekwissenschaft, Handschriftenkunde, und aeltere Literatur. Heraus. von Dr. Robert Naumann, Leipzig, T. O. Weigel, 1840 ff. (See 1845 pp. 209—224, and 1846, pp. 113—172, 177—190, 190—192, 204—206.)

The aggregate number of volumes in the public libraries of the United States is about 1,294,000. These are distributed among 182 libraries. Forty-three of these libraries contain over 10,000 volumes each; nine over 20,000 each; and only two over 50,000. The library of Harvard University, the largest this side the Atlantic, contains, together with the libraries of the law school and divinity school, upwards of 70,000 volumes.

These statements enable us to institute an instructive comparison between our libraries and those of the principal nations of Europe. It should be premised, however, that it is a very difficult thing to procure exact statistics of libraries. With reference to France, Germany, Belgium, Russia, and Spain, we are in possession of comparatively accurate returns. With respect to Great Britain, Holland, Sweden, Denmark, and Norway, those which I give below are as accurate as I could procure, though certainly not very satisfactory. I am not acquainted with any book which gives a good account of the present condition of libraries in several of these countries except one,* to which I have not had access. For greater convenience of reference and comparison, I present these statistics in a tabular form.

The first column of the table gives the name of the country.

The second, the year to which the statistics relate.

The third, the number of public libraries.

By public libraries are not meant those exclusively which are opened to the public without restriction, but rather those belonging to public institutions, and which are accessible under proper regulations to persons who wish to consult them for literary purposes.

The fourth column contains the aggregate number of volumes in the libraries.

The fifth gives the number of libraries containing over 10,000 volumes each.

The sixth, the average number of volumes in libraries containing over 10,000 volumes each.

The seventh, the number of volumes in the largest library of each country.

The eighth, the number of volumes to every million of inhabitants.

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*I allude to the Archiv der Gesellschaft für aeltere deutsche Geschitskunde. Herausg. v. G. H. Pertz. Bd. 8. Hannov, Hahn, 1843, 8°. Petzholdt in the Anzeiger für Literatur der Bibliothekwissenschaft for 1843, terms this an almost inexhaustible source of information on European Libraries.

Note.—Since writing the above, I have received the volume alluded to. The information which it contains, though fully justifying the expression of Petzholdt, relates principally to the manuscript treasures of the libraries, and is not of a statistical character.

Since the report was prepared, I have seen in the *Serapeum*, a translation of parts of an article containing a statistical account of libraries in Europe and America, first published in the Journal of the Statistical Society of London, by Edward Edwards, esq., of the British Museum. The original article I have not as yet been able to procure. It appears to have been prepared with great care and a wide examination of authorities. It would doubtless have saved me much laborious research had I seen it before writing my report.

Comparative statistics of libraries in Germany, France, Great Britain, Russia, United States of America, Denmark, Belgium, Sweden, Spain, and Norway.

Name of the country.	Date of statistics.	No. of libraries.	Aggregate number of volumes.	No. of libraries with over ten thousand volumes.	Average size of libraries of over ten thousand volumes.	No. of volumes in the largest libraries.	Comparative number of books to the population. No. to every million inhabitants.
Germany, including Austria and Switzerland	1845	103	5,578,980	68	80,000	600,000	136,072
France	1844	241	4,771,000	121	35,000	800,000	145,000
Great Britain	1840	31	2,001,000	23	85,000	420,000	83,000
Russia	1843	120	1,321,115	16	69,000	464,000	28,000
United States of America	1847	182	1,294,000	43	17,000	70,000	64,000
Denmark	1840	13	660,000	5	123,000	400,000	330,000
Belgium	1841	31	614,722	16	35,000	100,000	153,000
Sweden	1841	16	358,000	7	43,000	150,000	120,000
Spain	1835	21	354,557	5	57,000	200,000	30,000
Norway	1842	14	157,783	2	74,000	126,000	150,000

This table enables us to estimate at a glance, and with a good degree of accuracy the relative value of the public provisions made in Europe and America for general intellectual culture, as well as of those for the most extensive scientific and literary research.

It will be seen that in the *number of public libraries,* France is the only country in the world which excels us. It should be observed that the returns respecting France are official and minute, including libraries of not more than 500 volumes. Many of our public schools, however, possess libraries larger than these, but they are not enumerated in our lists. If they were, they would swell the number of American libraries far beyond that of any other country in the world.

In the aggregate number of volumes in the public libraries, Germany, France, Great Britain, and Russia, are before us. Were all the district school libraries and village collections in the United States included in the estimate, we should probably take the fourth rank.

In the average size of libraries containing over ten thousand volumes we are the *last of all.*

In the size of the largest library we also stand *last of all.*

In the number of volumes, compared with the population, we rank below all *but Russia and Spain.*

These results show that in public provisions for the general diffusion of knowledge by means of libraries, we stand in the very first rank among the nations; and when we consider the cheapness of our publications, and the vast number of them scattered over the land, with the extent of our periodical literature, we may justly and proudly challenge a comparison with any nation in the world for the means of general culture. This, certainly, is much for a country so new, whose chief energies have, as a matter of necessity, been directed to the felling of forests, the clearing of lands, and the support of physical life. It shows, as well remarked by a foreign writer, "that the men who, with steady and vigorous hand, have known how to rule themselves, and be completely free, have well discerned the foundations upon which alone the weal of a free State can safely repose."

But this deduction, so full of encouragement, so fraught with matter for gratulation and pride, must be followed by others of a different character.

The statistics given indicate, that while no country in the world has done so much for *diffusing* knowledge, none has done so little towards furnishing the means which public libraries can supply for its *increase.* It was doubtless the first duty of the infant republic to provide that all should know something, that the mass of the people should be elevated and enlightened. It has now become her duty to see to it, that no bounds are placed to the culture that each may obtain if he chooses. Now, in the hour of her strength, she ought to provide for her citizens the means of as high culture, of as profound research, of as noble advances in science, literature, and art, as are enjoyed by the citizens of any other nation in the world. She should take care that while the poor man's son may obtain that elementary education which will enable him to perform the duties of a good and intelligent citizen, he be not, by his poverty, debarred from the higher walks of science and literature; that there be no monopoly of learning by the rich—by those who are able to study at the institutions of Europe, or to surround themselves by the books which they need at home. Our condition in these respects has been deeply lamented by our scholars.

At various times strong efforts have been made for its improvement. At length the munificent bequest of a foreigner, placed at the disposal of Congress, furnished the means of meeting this, among other demands of science and letters. In the act of Congress establishing the Smithsonian Institution, and in the acts of the Board of Regents for the organization of the same, a large public library forms a prominent feature.

It has been supposed by some, not acquainted with researches requiring many books, that very large libraries are superfluous. They calculate, perhaps, how many books a man can read in a long life, and ask what can be the use of more. Nay, even many men fond of reading feel like an English writer of some note, who describes his pain as amounting to "midsummer madness" when he entered a large library and reflected how small a number of all the books it contained he could read through.

"In my youthful days," says De Quincey, "I never entered a great library, say of 100,000 volumes, but my predominant feeling was one of pain and disturbance of mind, not much unlike that which drew tears from Xerxes, on reviewing his immense army, and reflecting that in 100 years no one soul would remain alive. To me, with respect to the books, the same effect would be brought about by my death. Here, said I, are 100,000 books, the worst of them capable of giving me some pleasure and instruction, and before I can have had time to extract the honey from one-twentieth of this hive, in all likelihood I shall be summoned away."

"Now I have been told by an eminent English author, that with respect to one single work, viz: the History of Thuanus, a calculation has been made by a Portuguese monk, which showed that barely to read over the works, and allowing no time for reflection, would require three years labor at the rate of, I think, three hours a day. Further, I had myself ascertained that to read a duodecimo volume in prose of four hundred pages, all skipping being barred, and the rapid reading which belongs to the vulgar interest of a novel, was a very sufficient work for one day. Consequently 365 per annum, that is with a very small allowance for the claims of life on one's own account and on that of one's friends, one thousand for every triennium, that is ten thousand in thirty years, will be as much as a man who lives for that only can hope to accomplish. From the age of twenty to eighty, the utmost he could hope to travel through would be twenty thousand volumes, a number not, perhaps, above five per cent. of what the mere current literature of Europe would accumulate in that period of years."

Now, supposing for a moment that there were no other use to be made of books but the reading of them through at so many pages the hour, one would think it might have occured to this writer that there are among the frequenters of a large library a great variety of men, with a wide diversity of interests, tastes and pursuits; that though each might not be able to read through more than two thousand books—one-tenth part of the supposed number—still fifty men, whose reading was in diffierent directions, might call for a hundred thousand.

But apart from this consideration, and above it, is another of far more importance to the scholar. It is that this view of the use to be made of a large collection of books is founded upon an utter misapprehension of the relation of books and libraries to learning.

There are three uses to be made of books by those who understand their value.

The first is for *reading*. This, paradoxical as the assertion may sound, is the least important of their uses. By reading I mean cursory perusal, such as the writer above quoted describes. Reading as a pastime—reading for the acquiring of general information—reading as a means of refining and cultivating the tastes—is, indeed, indispensable to every well educated man. And the means of such reading in this country are largely supplied by our circulating libraries, athenæums, book auctions, and cheap publications. But the scholar has need of books for other and higher purposes.

A second important use of books is for *study*. By study, I mean that vigorous mental application, which is necessary in order to fully comprehend, weigh, analyse, and appropriate the thoughts, facts, and arguments of an author. It is study which disciplines the mind; which trains the intellect for the rapid accumulation and appropriate use of knowledge. It is study which gives education, which developes the faculties. But it is evident that for study one needs even fewer books, if they be rightly chosen, than for reading.

The third use to be made of books is for *reference*.

Every man has occasion to refer to a dictionary or an encyclopædia. Yet who ever undertakes to read one through? Every one accustomed to composition sometimes has occasion to trace the history and meaning of a word. "There are cases," says Coleridge, "in which more knowledge of more value may be conveyed by the history of a word than by the history of a campaign." But to learn the history or usage of a single word we may be compelled to look into five, twenty, or fifty dictionaries in different languages.

Now the use of books by scholars is in general analogous to the use of a dictionary by any intelligent man. There are some sciences which seem to require less the aid of libraries than others. It may even be true that some important discoveries have been the result of mere accident. But such is not the general rule. The progress of science is not fortuitous. Nature does not often disclose her treasures upon a blundering invitation. She must be diligently sought. He who would make valuable discoveries, must, as a general thing, prepare himself by a thorough acquaintance with the present condition and tendencies of the science which he cultivates.

He must do more, much more. "Of every branch of the two great subdivisions of human learning," (viz: science and literature,) says an able writer, "its history is a constituent part, absolutely necessary to all who would be competent to form just opinions on its present state." He must know the past in order to appreciate the present, and in order to help shape the future. He must not only be able to place himself on the line of demarcation between the unknown and the known, but if he would penetrate the darkness of the former, he must have gained his direction by a careful tracing out of the analogies of the latter. Consequently he must give himself to long-continued, patient, laborious study of the history of science.

Moreover, it is not only necessary to study that science which one wishes to enlarge by his discoveries: he must be familiar with the subjects which are allied to it. But where can we find the limits of any science? All knowledge is bound together by an indissoluble, though sometimes an invisible bond. He who is versed in but one department of science, and is entirely ignorant of others, cannot be said to be thoroughly acquainted with any. In the words of the writer already quoted, "If books could be arranged in order of relevancy, with respect say to natural science, from the one which is most essential to it down to the one which is least essential to it, there would be no perceptible break anywhere, no point at which natural knowledge ends and other knowledge begins." What, then, must he who would devote himself to the enlargement of one department of knowledge, wait ere he commences till he has mastered all? By no means, such is not the inference. The legitimate conclusion from the argument is, that no thorough student in any one department of knowledge can safely say that he may not need 10,000, or even 50,000, books, and many of them of a character at first sight most remote from his path, not, indeed, for the purpose of reading or of studying them, but in order to settle, by momentary references, questions which may arise, the settling of which may be of the greatest importance to his progress.

If this be true with respect to those sciences where there is the least apparent want of books, much more is it so of those whose deductions are drawn from researches among the records of the past. The demands of the statesman, the jurist, the political economist, the historian, cannot be met without furnishing the materials for the widest investigation, nor always, indeed, those of the novelist or the poet. I have sometimes heard it said that the knowledge of the middle ages to be gained from one of the novels of Sir Walter Scott is far more valuable than that to be acquired from the perusal of a library of dusty tomes. But who that has ever lived was a more constant delver amidst the dusty lore of the past, in old libraries, among worm-eaten books, than the illustrious author of these volumes. He could not otherwise have produced them. Without the large libraries we could not have had the enchanting romance.

If it be asked, whether the libraries which we already possess are not sufficient to meet this demand, we reply, in the first place, that the large libraries of Europe, containing from 200,000 to 800,000 volumes, some of them selected with great care, have not been found large enough to meet the wants of her scholars, and we may not allow that our countrymen are less fond of learning, less thorough and profound in their investigations, when they have the means of pursuing them, than their transatlantic brethren.

It may, however, justly be supposed that the number of volumes is a very inadequate criterion of the value of a library; that a judicious selection may do much to compensate for numerical inferiority, and, consequently, that our libraries, although smaller, may be more useful to learning than the larger collections of Europe. This may be sufficiently answered by applying another and the most satisfactory method of testing the real value of our libraries; which is to take some works of acknowledged learning and importance, and inquire what books were necessary for their composition, and how many of them our public libraries can furnish? This process, it will be seen, is a tedious one. I have, however, pursued it in reference to a considerable number of books on a variety of subjects. Some of the results thus obtained may be stated in a few words, and they are fair specimens of all the others.

In Mr. Wheaton's History of International Law—a production which reflects great credit upon American talent and scholarship, and which procured for its lamented author the honor of election to the French Institute—139 works are referred to in the notes. A much larger number were, of course, consulted, many of which are mentioned in the body of the work. Thirty-nine among the most important and expensive of those which are formally cited, are not to be found in the largest law libraries in the United States. More than one-half of the remainder are common books, to be found in any well selected general library of 5,000 volumes. This work was written in Europe. It could not have been written in this country from the materials contained in our public libraries.

If we take a book of a different kind, demanding for its composition a thorough knowledge of the history of one of the physical sciences, and, consequently, requiring the assistance of authorities less accessible and of less general importance, the result will be all the more striking.

In the first volume of Hoefer's History of Chemistry, 251 works are referred to. Of these, about fifty are common books, to be found in almost any library of 5,000 volumes. Of the remaining 191, I cannot find 75 in all our public libraries.

The plan of our Institution contemplates the publication of a series of reports on the condition and progress of various branches of knowledge, prepared by *collaborators* who are to be furnished with all the journals, domestic and foreign, necessary to aid them in their labors. Such reports, if properly prepared, will be very useful. We need merely refer, for illustration, to those published by the Swedish Academy. But the preparation of them will require the purchase of a great number of books which are not at present to be found in our public libraries. This will be made manifest by a few facts. Of 38 publications, mostly periodical, referred to in a late report of Berzelius on the progress of chemistry, I can find but 13 in our public libraries.

Mr. J. R. Bartlett informs me that of 204 works which he refers to in his report on the progress of ethnology, 129 are not to be found in the public libraries of New York, nor in any others probably in the United States. The cost of the books which, in order to prepare his work, he had to procure at his own expense, was $1,000. And yet this report is only a pamphlet of 151 pages.

From these facts it is manifest that there is no exaggeration in the language of one of the members of our Board of Regents, from South Carolina, who, in a report to the Senate in 1836, stated that "our whole body of literature, if collected in one place, would not afford the means of investigating one point of science or literature through all, or even a considerable portion of what has been written on it." Here, he adds, "where the foundations of government repose on the aggregate intelligence of the citizens, the assistance afforded by public institutions to the exertions of intellect is but one-tenth of that within the reach of the mind of civilized Europe."

The complaints of our scholars testify to our deficiency. Their wants have weighed heavily upon them. They have repressed genius. They may have condemned to oblivion names that would have rivalled the brightest in the history of science and letters. I might mention, it is true, Americans who have ranked among the most learned of the world. But they, like others less renowned, have had sorrowful experience of the deficiency of which we complain. They, however, in most instances, have, from their own private wealth, supplied the defects of public provisions. Had they been poor they would not generally have been the authors they were. They could not have had access to the necessary books, had they not possessed the wealth for buying them, or for crossing the Atlantic to consult them where they were already accumulated. The pages of our literary journals, the eloquent speeches elicited in Congress by the bills to establish the Smithsonian Institution, and the united voices of the friends of good letters throughout the land bear sad and unvarying testimony to our deficiencies.

Now, to supply these wants, or, in other words, to place American students on a footing with those of the most favored country of Europe, is the design of the Smithsonian Library.

We have, as yet, been able to make no purchases, except of those books which were of immediate and indispensable importance to the officers of the Institution, including the Building Committee. It is profoundly to be regretted that we were not in a position to avail ourselves of the extraordinary opportunities for the purchase of books which have been offered in Europe during the last eight months. In May or June last, or even later, in September and October, more valuable books could have been purchased, it is said, for five thousand dollars than at ordinary times for fifty thousand. I felt it my duty to lay before the committee, last summer, the facts which I had collected on this subject, and to express the earnest hope that we might be able to profit by the juncture; but the financial arrangements of the Board entered into for the purpose of completing the building prevented any immediate appropriation for this purpose. It is gratifying to know, that although this profiting must be lost to us in particular, our country will share in it, through the exertions of the gentleman to whom—most fortunately for American scholarship—has been entrusted the task of selecting and purchasing a large library for our chief city.

I should deem it hardly necessary at this time to allude to an idle story which was circulated about a year ago, to the purport that the Institution had expended $2,500 for the purchase of an old Bible, valuable principally as a typographical curiosity, were it not that many of our citizens are not to this day disabused respecting it, and really suppose that we committed the folly thus imputed to us. No such purchase has been made or contemplated. On the contrary, I believe that all the officers of the Institution are decidedly opposed to any such expenditure of the fund. We wish books for use and not for the gratification of mere curiosity.

By a decision of the Regents, the income of the institution, which, after the completion of the building, will amount, it is hoped, to nearly $40,000 per annum, will be permanently divided between two great methods of increasing and diffusing knowledge which had been proposed and discussed; the one by publications and original research, the other by collections in literature, science, and art. The share of money which, in accordance with this arrangement, will fall to the library, will not be sufficient to enable it to meet at once the demands of our expectant scholars. It will be many years before their wishes can be fully gratified; but in the meantime, by a wise expenditure of the funds, and by other assistance which our arrangements provide for, it is hoped that the library will be such as to afford great aid to learning.

The plan of collecting the library is as follows:

1. To purchase such books as may be needed by the various officers of the institution, and by persons preparing memoirs and reports for our publications, or engaged in researches under the direction of the Secretary.
2. To procure such works as may be required to render the institution a centre of bibliographical reference.
3. To procure a complete collection of the memoirs and transactions of learned societies throughout the world, and an entire series of the most

important scientific, and literary periodicals. The continuation of these may be obtained in exchange for our own publications.

4. The remaining funds of this department will be devoted to the purchase of books of general importance; at first, most especially those which are not to be found in other libraries of the country.

In pursuance of this plan, I have been occupied in making lists of books to be purchased.

With reference to the first class of books, namely: those needed by the authors and collaborators, it is, of course, impossible to do any thing more than to meet wants as they arise.

Of the second class of books, viz: those necessary to make the institution a centre of bibliographical knowledge, I have the honor herewith to present a list selected with great care and the best counsel which I could command. This list contains about 3,000 volumes. The work of Namur, published in 1837, purporting to be a complete catalogue of bibliographical works, contains 10,236 titles. A complete bibliographical library would contain nearly 20,000 volumes. The 3,000 volumes of the list, now presented, are not therefore to be considered as constituting a complete catalogue of books in this department, but merely as a selection of those most immediately important.

Every list of this kind should include not only works professedly bibliographical, but also histories of literature, of science, and of art, as well as many biographical and critical works.

It is impossible to estimate too highly the value of such a collection. In a large library these works are the guides to research, showing what to read, study, or consult. In the absence of such a library, they supply to some extent the deficiency by describing books in such a way as oftentimes to enable us to dispense with the books themselves.[*]

And yet the importance of bibliographical studies is in this country but too little appreciated. In truth, the neglect of them is the most fruitful source of superficial, conceited, and rash authorship. On the continent of Europe, however, they are held in the highest esteem. This is doubtless one principal cause of the acknowledged superiority of the Germans in all matters requiring wide research.

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[*] "In literature and science books are the tools, and it is impossible to under-estimate the use of a critical acquaintance with them except to those who underrate knowledge itself. Of every branch of the two great subdivisions of human learning, (viz: literature and science,) its history is a constituent part, absolutely necessary to all who would be competent to form just opinions on its present state.

"The scientific societies are not very anxious to have in their libraries the rare books belonging to their several departments. For this, one reason is want of funds; but this might be overcome if it were not for another, namely, a general indifference among the members to exact and minute knowledge of the history of science. The *peu nous importe au reste* with which Delambre often dismisses a secondary point, of which a satisfactory settlement does not come readily to hand, had been readily agreed to by his critics and his readers. The consequence is, that any one who proceeds to examine closely the actual records of the progress of science, finds confusion upon confusion and mistake upon mistake in all matters which are not of general interest.

"It is worthy of note how completely several of the best histories of branches of science are on a bibliographical basis, proceeding rather from book to book than from man to man. Such are those of Weidler, Delambre, and Kästner, for though the nominal arrangement of the first is by men in order of time, yet the men are only constituent parts of their own title pages.

"In literary history books are the main facts, and none but those who have tried it can tell how many difficulties are thrown in the way of an investigator who has truth for his object and permanent rules of evidence for his guide, by the misstatements which exist upon works which, however necessary it may be to know them, it may hardly be worth while to name. The date, the author's christian name, the very size of a book may be the turning points of the proof of a fact. The inquirer cannot have all the books before him, of many he wants only the proper description, and being certain of this, he could almost dispense with any knowledge of the contents.

"But let the reader *think* what he pleases, the historian of science *knows* that he cannot do well without complete and correct bibliography."—*Dublin Review, September,* 1846, *Art.* 1, *on Mathematical Bibliography.*

Every student worthy of the name, when about to investigate a subject, wishes to know first what has been done by others in the same field.

Now, on almost every important branch of learning some diligent scholar has collected from the whole domain of literature the books pertaining thereto, arranged them for convenience of reference, analyzed their contents, and described their absolute and relative merit, with their external peculiarities and history. He has thus given a *bibliography* of that branch of knowledge. Such a work should manifestly be the first to be taken up, and among the last to be laid down by any one who would intelligently study that subject. A collection of such works, pertaining to all departments of knowledge, ought to be the first purchase for every general library.

Yet there is no respectable collection of them in any of our public libraries. The best is, I believe, that of Brown University, which contains but a few hundred volumes. Without question, therefore, by procuring the books necessary for carrying out the plan of making the library a centre of bibliographical reference, we shall furnish one class of books most immediately important to American scholars, as well as one most needed in making judicious selections for the future, and in aiding other libraries in the country in their choice of books.

The selection here offered is intended to cover nearly the whole ground of bibliography, and is arranged under the following divisions:

1. BIBLIOTHECAE BIBLIOGRAPHICAE, or catalogues of bibliographical works.

2. ELEMENTARY BIBLIOGRAPHY, including treatises of the origin and progress of writing; of ancient manuscripts, their materials, form, ornaments, preservation, and the method of deciphering them; of printing, its history, and practice; of the arts of engraving, binding, paper-making, &c.; of the forms of books; of the rights of authors, publishers, and readers; of the book trade; of the use and abuse of books; of libraries, their history, statistics, selection, arrangement, preservation and use.

3. PRACTICAL BIBLIOGRAPHY. Works designed to be used in the selection and purchase of books. These may be—

  (1.) *Universal*, comprising books in all languages, on all subjects, and of all periods.
  (2.) *Limited*—
    a To particular countries or languages.
    b To particular periods of time.
    c To particular branches of knowledge.
    d To works classed according to some accidental peculiarity, as rare, anonymous, pseudonymous, polyonomous works, books privately printed, books prohibited, books condemned to be burned, &c.
    e To particular kinds of composition, as poetry, proverbs, &c.

Under most of these heads are comprised works of several kinds, viz: 1. The history of the subject; 2. The bibliography, properly so called, i. e. the *catalogue raisonné* of all books relating to it; 3. The biography of its cultivators; 4. The journals which contain the record of its progress. Thus, in the department of natural history, would be included Cuvier's History of the Natural Sciences, Engelmann's Bibliography of Natural History, Callisen's Biographical Dictionary of Naturalists, and the Annals of the Natural Sciences; and inasmuch as neither of these is perfect of its kind, there must be many others of each description.

With regard to the third class of books, viz: the memoirs and transactions of learned societies, I have made and herewith present a list which I believe to be nearly complete, of all the publications of learned societies in actual operation throughout the world. Doubtless these publications possess various grades of merit. But it is difficult, and I think undesirable, to reject any of them. Papers of the greatest importance are sometimes published in the transactions of the most obscure provincial academies.

The Department of Public Instruction of the French government published in the year 1847 the first volume of a work intended to be continued annually, entitled "Annuaire des Sociétés Savantes de la France et de l'Etranger." The volume for the first year, an octavo of more than 1,000 pages, contains historical sketches of all the learned societies in France, the regulations of the institutions, an account of their various publications, and other works, and the names of their members. A similar account of the academies of other countries was promised for the second year, but I cannot learn that it has yet appeared. The labor upon it was probably interrupted by the revolution of February, and has not yet been resumed.

The lists which I now present are made from the Rev. Dr. Hume's "Learned Societies and Printing Clubs of the United Kingdom" for Great Britain, the "Annuaire" for France, and from various other sources, principally from the first volume of the catalogue of the printed books in the British Museum for other countries.

The remaining duty assigned me was the systematic arrangement for purposes of comparison of the printed catalogues of the principal libraries in the United States. This, also, is a part of the plan for rendering the Institution a centre of bibliographical knowledge.

I have commenced the work in the following manner: Taking the printed catalogue of the library of Harvard University, I separate the titles and paste each one upon a card about six inches long by four wide. This size of card was selected in order to allow room for long titles with the annotations which may be necessary. The letters "H. U." are to be stamped upon the card to denote that the book belongs to Harvard University. When the titles of the Harvard catalogue are finished it is proposed to begin upon the catalogue of the Philadelphia Library. Whenever the titles are the same it will be sufficient to stamp upon the card in addition to the letters "H. U." the letters "P. L. C.," thus denoting that the book belongs also to the Philadelphia Library Company. When new titles are found, they should be placed upon cards like the others. The catalogues of all the other libraries are to be treated in like manner. When the arrangement of the printed catalogues is completed, it will be necessary to obtain manuscript continuations. These must be copied on the same kind of cards. It will then be easy to arrange the titles in alphabetical or other order, and to preserve them in such order, however frequent and numerous the accessions which may be made.

It is hardly necessary to enlarge upon the great value of such a catalogue. From it we could readily ascertain what books there are in the various public libraries, and how well each department of learning is provided for. We should thus be enabled to fill up our own library with a more intelligent reference to the actual wants of the country.

Such a catalogue will also enable us to direct the student to the books which he may want, if they are to be found in any of our libraries.

There will be also an incidental advantage gained by it of great importance to the department of American history and bibliography. The institution proposes to publish among its "Contributions" a complete bibliography of the materials of American history prior to A. D. 1700. This will be one of the most valuable contributions ever offered to the facilities for studying the early history of our country. But it is only a commencement. The books relating to and printed in America after 1700 are vastly more numerous and certainly of great importance. They relate to the period of our early struggles, to the achievement of our independence, to the formation and consolidation of our government. No proper bibliographical survey of this wide field has ever yet been made. The books and pamphlets relating to it were published, the larger part, perhaps, in America, but many of them in Europe, and they are now scattered far and wide. Some very valuable collections have been made of them, the best of which is due to the diligence, learning, and devotion of a distinguished gentleman of this city.* No collection, however, that has yet been made can be considered complete. Still we may safely say that a large proportion of the books extant relating to this period are to be found among the libraries of the United States. One great difficulty heretofore encountered by our bibliographers has been to ascertain where they are preserved. Many libraries have no printed catalogues; of others the catalogues are far in arrears. From our proposed general catalogue it will be easy to find every book of this description which is preserved in any of our collections, and to ascertain at a glance the place of its deposite.

I have made, of course, but a commencement on this work. To bring it to completion will be the labor of more than another year.

In conclusion, I may add that the plans in operation for the library will, it is hoped, soon render it a valuable aid to American scholarship. Its sphere is quiet and unobtrusive, but none the less useful. Ere long it is destined, we hope, to rank among the largest, the best selected, and the most available literary treasure-houses of the world. Wherever such a collection is formed, be it in a large metropolis or a provincial town, thither students will resort. They will soon give tone and character to society around. Even in the great emporium of commerce, under the overshadowing power of trade, its influence would soon be recognized. Here, at the political centre of the nation, where assemble her statesmen and her orators, under a benignant sky, amid scenes consecrated in her history, a spot as accessible as any other from all parts of the country, is the most favorable location for a great library. Such a library will attract hither our scholars, now pursuing their investigations in Europe, or mourning at home over noble projects abandoned before the necessity of so long and expensive a pilgrimage. It will render Washington the centre of American learning. Its influences will descend noiselessly upon the community around, and spread in ever-widening circles over the land, softening the asperities of party contentions, calming the strifes of self interest, elevating the intellect above the passions and the senses, cherishing all the higher and nobler principles of our being, and thus contributing more than fleets and armies to true national dignity.

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*I allude to the library of Colonel Peter Force. It contains more than 20,000 books, with large numbers of manuscripts, pamphlets, handbills, maps, &c., mostly relating to American history—an invaluable collection, one of the chief ornaments of our city, where we trust it will ever remain.

Respectfully submitted.

C. C. JEWETT.

No. 2.

The Executive Committee submit to the Board of Regents the following report of the expenditures, state of the finances and condition of the Smithsonian Institution.

The whole amount of Smithson's property received into the treasury of the United States on the 1st September, 1838, was $515,169. The interest which had accrued on the same up to 1st July, 1846, when, by the act of Congress, the funds were placed under the direction of the Board of Regents, was $242,129. This sum, together with the accruing interest, the Board of Regents were authorized to expend in the erection of a building and in defraying the current expenses of the institution.

During the last two years and four months, in which the institution has been under the charge of the Regents, there has been expended towards attendance of the Regents, and incidental and miscellaneous expenses, the erection of the building, improvement of grounds, salaries of officers, the sum of $105,520 19, as will be seen in the following exhibits, viz:

Construction of buildings, including superintendence		$51,678 48
Expenses of architect's office, traveling expenses, stationery, draughtsman, &c.		1,213 00
Laying corner stone		21 00
Examination of quarries and specimen walls		74 00
Improvement of grounds		1,290 88
Publication of "Hints on Public Architecture"		1,147 25
Occultations and researches		525 00
Philosophical and chemical apparatus		332 70
Public lectures		80 00
Publication of Contributions to Knowledge		3,709 34
Library, and salary of librarian		1,741 38
Pay of messenger		388 13
Recording and copying for Board of Regents, Executive Committee, &c.	$116 54	
Do for Secretary	232 00	348 54
Incidental expenses	533 10	
Do for Secretary, including office rent	177 65	710 75
Expenses of Board of Regents and Committees		966 90
Expenses of Secretary consequent upon the delivery of lectures at Princeton, and expenses to New York and Philadelphia on business of the Board		280,50

[N. B. The proceeds of the lectures at Princeton, $1,000, have been paid by the Secretary.]

House rent of Secretary for two years	$550 00
Payments to Secretary on account of salary	3,824 31
	68,880 17
Disbursements as exhibited by previous reports	37,670 02
	106,550 19
During the same time, there has been received from interest and the sale of treasury notes, the sum of	$115,964 60
From the Secretary's lectures at Princeton	1,000 00
	116,964 60
Leaving a balance on hand of	10,444 41

Funds of the Institution.

Amount of Smithson's bequest	$515,169 00	
Interest due thereon to 1st July, 1846	242,129 00	
		$757,298 00
Balance on hand 1st January, 1849	10,444 21	
Treasury notes on hand	226,000 00	
Permanent fund	515,169 00	
		751,613 41
If to this we add the premium of 8 per cent., which treasury notes now bear, say		18,000 00
The funds of the Institution will be		773,613 21

Thus showing, that after an expenditure of $106,550 19, the cash on hand and the value of the cash investments, exceed the amount on hand, on the organization of the Institution, in September, 1846, by nearly $16,000, subject, however, to a few outstanding accounts not yet presented, estimated at $7,500.

The committee are confident that by continuing the system of finance recommended by the committee and adopted by the Board of Regents at their last annual session, the building can be completed and the institution be put into full operation at the end of three years from March next, without withdrawing more than $100,000 from the fund of $242,169 set apart by Congress for buildings, &c., leaving the residue, $142,000, to be added to the amount of the original bequest of Smithson, and making the permanent fund of the Institution $657,000, yielding an annual income of $39,420, (which may thereafter be readily increased to $40,000 per annum,) for the increase and diffusion of knowledge.

During the past year the committee has held frequent meetings at the call of the Secretary, for consultation with that officer on the affairs of the Institution. The several operations mentioned in the Secretary's report were discussed at these meetings, and several small appropriations were authorized, which arose from contingencies unforeseen by the Board, and which were duly charged and exhibited in the accounts of the committee. The Board of Regents having authorized the Executive Committee to make compensation to the Assistant Secretary, acting as librarian, for his services to the Building Committee, and relative to the library, have granted him the sum of $250.

An extra edition of the Secretary's report for the year 1847 was ordered to be printed for the use of the Board of Regents from the forms used by the printer for Congress.

Mr. Bache and the Secretary were appointed a committee to confer with Dr. Hare relative to the presentation of his extensive and valuable chemical apparatus to the Institution; which committee afterwards reported that Dr. Hare had unconditionally presented his apparatus to the Institution, and that workmen had been employed to clean and pack the same for removal to Washington. A complete set of the "Annales de Chimie" was authorized to be purchased of Dr. Hare, to accompany his apparatus.

The Secretary was authorized to order, conditionally, the instruments necessary to complete the outfits of Lieutenant Gillis of the navy, on his scientific expedition to Chilé.

A number of propositions relative to publications, researches, &c., have been submitted to the Executive Committee, and have been referred to the Secretary and Dr. Bache.

On consultation with the Secretary and Librarian, the committee recommends the following appropriations for the operations of the Institution during the year commencing on the 19th March next, viz:

For publication of Contributions to Knowledge	$3,000 00
Scientific researches and computations	700 00
Meteorological instruments and researches	1,000 00
Expenses of public lectures, including lights	500 00
Publication of scientific reports	500 00
General catalogue of American libraries	1,000 00
Purchase of bibliographical works and books of general reference	2,000 00
Binding of books, blank books, stamps, certificates, &c.	250 00
Purchase of books needed by authors of memoirs, reports, &c.	400 00
General expenses, including salaries of officers, expenses of Board and committees, clerk hire, postage, &c.	8,000 00
	17,350 00

The aggregate of the above estimates exceeds, by the sum of $2,350, the amount limited by the finance resolutions of the Board of Regents, December 1, 1847, as applicable each year for the operation of the Institution, exclusive of the building fund, until the year 1852, when the building is to be completed and the entire income of the Institution left free for the prosecution of the objects contemplated by the acts establishing the Institution; but as the present available funds exceed the amount anticipated when these resolutions were adopted, it is believed that the additional $2,350 may be spared in the ensuing year for the objects specified, without trenching on the annual building fund, or endangering the accomplishment of the end had in view by the Board of Regents in adopting the finance resolutions of December 1, 1847, namely, the saving of a certain sum to be added to the permanent fund. In conclusion, the committee would beg leave to submit to the Board that the amount and variety of disbursements which the Executive Committee have to make, and the proper keeping and recording the accounts and appropriations of the Institution, require the services of a skillful accountant and book-keeper for the performance of this duty, as well as the examination of accounts for payment, the preparation of estimates on which to base requisitions, the preparation of statements of expenditures for the examination and approval of the proper officers, as required by law, preliminary to their presentation to the Treasury Department for settlement, and such other duties of accountant, book-keeper, and clerk, as the Board of Regents, the Executive, and Building Committees, and the Secretary may have occasion to require of him.

The committee therefore recommend the appointment of such an officer, at an annual salary not exceeding four hundred dollars.

All of which is respectfully submitted,

W. W. SEATON,
J. A. PEARCE,
A. D. BACHE.

WASHINGTON, *January* 1 1849.

No. 4.

During the past year the Smithsonian building has been advanced in a manner satisfactory to the committee.

An inexhaustible supply of freestone of excellent color and quality is afforded by the quarries; and the deliveries have met with no such interruptions from failures in the canal as were experienced last year, to the great delay of work upon the building.

The east wing of the building, and the adjacent connecting range, are so far completed that the architect promises a state of readiness for occupation early in January. He reports the whole interior of this part to be finished, with the exception of the shelving of the cases—purposely delayed to enable the Secretary of the Institution to adjust it to the apparatus which it is to receive. He reports, also, that the furnaces for supplying warm air to these rooms, and also the ventilating apparatus, will be completed at the same time.

The west wing and its connecting range are completed externally, and the interior of the hall of the gallery of art—intended to be used temporarily as a library—is well advanced. A portion of the book-cases are in progress, and will be placed in this apartment until the library-room proper, in the centre building, shall be ready for their reception.

The foundations of the whole of the main building, including the towers, are laid, and the superstructure carried about five feet high. The campanile and octagonal towers, and two smaller corner towers of the centre, are 30 feet above their foundations.

The architect also represents that the contractor, Mr. Cameron, has cut all the stone for the first story of the main building, and designs, if possible, to have the whole of this part of the structure under roof before the winter of 1849–'50, in order the better to protect the walls.

The committee see no reason to doubt that the whole structure will be completed within the time specified in the contract, namely, by the 19th day of March, 1852.

The total amount expended on the building and on the fencing of the lot, including superintendence, and all incidental expenses connected therewith, up to the 1st of December, 1847, was, as stated at that time - -	$25,002 67

The amount expended on the building and its appurtenances from the 1st of December, 1847, to the 31st December, 1848, is as follows:

Paid Mr. Cameron, contractor - - - -	$50,860 00
Paid Mr. Renwick, architect's salary - - -	1,800 00
Paid Mr. Renwick for travelling expenses - - -	330 94
The expenses of architect's office, including furniture for and incidental expenses of the same, drawing instruments, stationery, and pay of draughtsman - - -	253 69
Paid Mr. Robert Mills, assistant architect and superintendent, for part of the year - - - - -	392 73
Paid Mr. Brown, superintendent, for three months -	187 50
Paid for improvement of grounds - - - -	109 88
Total - - - -	$53,934 74

The total expenditure on the Smithsonian building from the beginning up to the 31st of December, 1848, may be thus stated:

Paid Mr. Cameron, contractor for the building - -	$71,700 00
Paid Mr. Renwick, architect, as salary - - -	3,475 48
Paid Mr. Renwick for travelling expenses - - -	629 78
The expenses of architect's office, including furniture for and incidental expenses of the same, stationery, drawing instruments, and pay of draughtsman - - -	583 23
Paid Mr. Mills, as assistant architect and superintendent -	1,247 84
Paid Mr. Brown, as superintendent, for three months -	187 50
For improvement of grounds - - - -	743 38
For water-pipes and laying the same - - -	660 00
Making a total to the end of the year 1848, of - -	79,227 21

At the last annual meeting (December, 1847,) it was resolved that there should be considered applicable to the building, (including preceding expenditures,) up to the 19th day of March, 1848, the sum of - - - - -	$42,000 00
And for the year ending March 19, 1849, the further sum of	52,000 00
Total - - - -	94,000 00
But, as shown above, the expenditures to the end of the year 1848, have been - - - - -	79,227 21
Leaving a balance applicable, of the building fund, between 1st January and 19th March, 1849, of - -	14,772 79

Judging from the progress already made, the committee are of opinion that the contractor will be able to finish the building, and all other matters comprised in his contract, for the stipulated amount; and that all expenditures connected with the building, including the laying out of the grounds, planting, sodding, fencing, road-making, heating, ventilating, &c., may be comprised within the limit of $250,000, set by resolution of the board at the last meeting.

During the past year the committee have entered into contract, amounting to $1,050, with Mr. John Douglass, of Washington, for enclosing the grounds of the Institution with a hedge, and for planting trees and shrubbery. The architect having marked out the paths and roads, and indicated the positions of the trees and shrubs, these, comprising about 160 species, principally American, have already, for the greater part, been planted, as well as the surrounding hedges, which are to consist of pyrocanthus, Osage orange, Cherokee rose, and hawthorn, respectively, on the four sides of the lot. Investigations and inquiries that have been made on this subject, satisfy the committee that this climate is favorable to the growth and maintenance of hedges, and that for a moderate expense a permanent and beautiful enclosure will be secured. The architect has been requested to prepare drawings and estimates of the gateways necessary to connect the building with the adjacent streets.

Proposals have been obtained for putting up furnaces in the east wing; also, for sodding a portion of the ground immediately around the building, and for making permanent roads and paths from the streets to the building and through the grounds; but it is not contemplated to engage in these last-mentioned works at present.

In relation to the work entitled "Hints on Public Architecture," prepared by the late Chairman of the Building Committee, for publication by that committee under resolution of the Board, it is to be stated that the manuscript has been submitted, under vote of the committee, to the inspection of Judge J. K. Kane, of Philadelphia, Governeur Kemble, esq., of New York, and President Everett, of Cambridge University. From all of whom letters communicating their opinions of the work have been received, and are submitted with this report.

Mr. Owen, in a late letter to one of the committee, states his intention to be in New York by the 20th December, to superintend the printing; the printer refusing without his supervision and arrangement of the illustrations, &c., to put it to press, and expresses his confident belief that it will issue by the 10th of February—certainly, before the adjournment of Congress.

The architect of the Institution, who has drawn many of the illustrations, and superintends the engraving gratuitously, states that all the engravings are ready, or nearly so, and that the illustrations will amount to upwards of 100, of which six will be lithographs and the remainder wood-cuts by the best engravers in the country.

The wood-cuts generally do great credit to the engravers; a few of the principal ones have been brought on by the architect, and are herewith laid before the board.

The expense of the engravings contrated for will be $2,000, of which $ has been paid up to 1st December, 1848, the remainder being due the engravers.

The vestry of Grace Church, in the city of New York, have presented to the committee a lithograph of that building, which will cost the vestry

$100. The draughtsman, Mr. Wade, Messrs. Bobbett & Edmonds, engravers, and Mr. Putnam, the publisher, have presented a beautiful illustrated title page which was designed by the architect of the building.

As it may be satisfactory to the board to learn as much as can now be communicated in relation to such expenditures—not embraced in the contract with Mr. Cameron—as have been, or will be, necessary upon the building and grounds; and which must fall within the building fund of $250,000—the commitee proceed to add the following statement:

Amount of Mr. Cameron's contract		$205,250
Remainder applicable to other objects connected with the building or grounds than those provided for in said contract		44,750
		250,000
Amount applicable as above		44,750
Portions of the expenditures now referred to, are either fixed and definite in their nature, or have been already settled by resolution; they are as follows:		
Architect's salary for five years	9,000	
Superintendent's salary for five years	5,000	
Incidental expenses allowed to architect	2,000	
Facing area wall with cut stone, extra work, allowed by resolution	480	
Adding battlements to cloisters of east wing, extra work, allowed by resolution	200	
Additional cases for apparatus, ordered by Secretary	200	
Contract for hedging, with Mr. Douglass	250	
Contract for planting trees and shrubs, with the same person	800	
Furnaces for warm air, registers, &c., already contracted for—say	600	
		18,530
Which amount of $18,530, deducted from the above sum of $44,750, leaves applicable to other objects of the same nature, the sum of		26,220
Two or three other small expenditures may be set down as admitting specific and close estimate, viz:		
Two chimneys to east wing, being extra work already done, and which, in the opinion of the architect, should be allowed	400	
Sodding ground near building, estimated at	100	
Deducting this total, viz		500
There still remains the sum of		25,720

Some of the matters to which attention is addressed as having claims upon this sum, are: the addition of other battlements to cloisters; of a clere story to the museum; the substitution of flights of iron for wooden steps in the towers; other hot-air furnaces; registers for ventilation; gateways into the grounds; additional trees and shrubs; making roads and paths &c., &c., &c. These objects, some indispensable, others more or less urgent, all conducive to utility, permanence, beauty, or convenience, will be decided on by the committee under the authority with which they consider themselves intrusted, and as occasion shall arise, only after mature deliberation on careful estimates in detail, and in a spirit of strict economy. The committee, above all things, intend to keep an earnest regard upon the pecuniary limits set to their operations, and to allow no transgression thereof, either by actual expenditure, or by engagements, or pledges.

A few words remain to be added in explanation of the extra work and alterations of plan alluded to in the preceding statements: as to which it is due to the architect to premise that these have not been caused by any omissions in the specifications of the contract. One item is for *facing the areas with cut-stone*—the contract having provided a facing of good blue Potomac gneiss. The change was adopted because it was thought that a stone facing of the same material as the face of the superstructure would be more harmonious with, and conducive to, the general effect of the exterior of the structure.

2. *Battlements of cloisters.*—After the cloisters of the east wing were completed, it became evident to the architect that from the comparatively low situation of the building, the roofs were too conspicuous, and should be concealed by an appropriate battlement. He therefore advised, and the committee sanctioned, the expenditure of $200 for the battlements of the eastern cloister. The committee has yet to act upon a like suggestion as to the western range.

3. *Two extra chimnies in the east wing* were added by the building committee after the plans were made, but before the contracts were signed. Mr. Cameron states that he was not aware of this addition, as it was made after he had completed his estimate; and the architect is therefore of opinion that his claim of extra compensation is just and equitable.

JOS. G. TOTTEN,
W. W. SEATON,
HENRY W. HILLIARD.

WASHINGTON, *December* 31, 1848.

APPENDIX A.

PROSPECTUS.

BIBLIOGRAPHIA AMERICANA:

A Bibliographical Account of the Sources of Early American History; comprising a description of books relating to America, printed prior to the year 1700, *and of all books printed in America from* 1543 *to* 1700, *together with notices of many of the more important unpublished manuscripts.*

Prepared by Henry Stevens, and published under the direction of the Smithsonian Institution at Washington.

PLAN OF THE WORK.

1. It will contain a descriptive list of all books relating to America, and of all books printed in America, prior to the year 1700, which may be found in the principal public and private libraries of Europe and America, or which are described in other works; together with notices of many of the more important unpublished manuscripts.

2. The descriptions will be made, as far as possible, from an examination of the books themselves. If any be taken from other sources of information they will be distinguished by some peculiar mark.

4. The titles, including the imprint or colophon, will in all cases be given in full, word for word, and letter for letter.

4. The *collation* of each book will be given; that is, such a description as will indicate a perfect copy.

5. The market value of the books, with the prices at which they have been sold at public sales, will, whenever possible, be given.

6. Different editions and various translations of the principal works will be diligently compared with each other, and their variations and relative merits pointed out, especially of such works as the Collections of Voyages and Travels by De Bry, Hulsius, Ramusius, Hakluyt, Purchas, Thevenot, etc.; the corresponding parts of which will be compared, not only with each other, but with the editions of the works from which they were translated, abridged, or reprinted.

7. Bibliographical notes will be appended when deemed necessary, containing abstracts of the contents of the works when the titles fail to give a proper idea of them; anecdotes of authors, printers, engravers, etc.; important items of historical and geographical information; notices of peculiarities of copies, as large paper, vellum, concelled leaves, etc.; the number of copies printed; together with the comparative rarity and intrinsic value of the works.

8. The notes upon the books printed in America will comprise a full history of the origin and progress of printing in North and South America, from the year 1543 to 1700.

9. Under the title of every work will be designated one or more libraries in which it may be found.

10. The titles will be arranged alphabetically, under the names of the authors, or the leading word of the title.

11. The work will contain a full introductory memoir upon the materials of early American history, together with an account of the principal collections of them which have been made in Europe and America.

12. Three indexes to the contents of the work will be given, viz: 1. A chronological index, in which the titles will be arranged according to the years in which the works were printed; 2. An index of the subjects treated in the books; 3. An alphabetical index of the persons and subjects mentioned in the notes and introductory memoir.

PREPARATION OF THE WORK FOR THE PRESS.

1. The expense of preparing the work for the press will be defrayed by subscription.

2. It is estimated that the work will contain not less than five thousand titles, which are to be obtained from the public and private libraries of England, Ireland, Scotland, France, Germany, Denmark, Sweden, Holland, Belgium, Spain, Italy, America, etc. It is obvious that if any single individual possessed the requisite knowledge of languages and bibliography for this task, it would require of him several years of unremitting toil. In order, therefore, to accomplish the labor within a reasonable period, it will be necessary to employ upon it several persons. These should be learned and responsible men. Such men cannot be employed unless their services be well requited. Besides this, the whole work must be superintended and revised by Mr. Stevens himself; who, for this purpose, will be subjected to heavy travelling and other expenses. It is estimated that the necessary expenses attending the preparation of the work for the press, to say nothing of Mr. Stevens's own time and services, will amount to $5,000 (or £1,000.) The work will not, therefore, be commenced until this sum is subscribed.

3. Any public institution or any individual possessing books of this class may join in the subscription on the following conditions, viz:

(1.) That all the books of this class, belonging to each subscriber be submitted to the inspection of Mr. Stevens, and all reasonable facilities and assistance be afforded him in his work.

(2.) That the name of the subscriber be indicated under the title of every book which he contributes, so that when the work is completed, it will show not only the treasures, but also the deficiencies in this department of the library of each subscriber, and enable him by marginal marks against the titles of books which he may subsequently procure, to preserve a perpetual record of his collection and of its deficiencies.

(3.) That each subscriber be entitled to contribute not only the title of every book of this class which he may possess at the time of subscribing, but also of all other books of this class, which he may procure for his own library previously to January, 1850, or before the work shall go to the press.

(4.) That the sum subscribed by each be in proportion to the number of titles contributed, or be such as Mr. Stevens may accept.

(5.) That this sum be paid to Mr. Stevens on the acceptance of the manuscript for publication by the Smithsonian Institution.
(6.) That each subscriber be entitled to receive from the Smithsonian Institution ten copies of the work for every $500 (or £100) subscribed, and in the same proportion for a larger or smaller subscription.

4. Inasmuch as the library of the British Museum contains a larger number of this class of books than any other library in the world, and at the same time affords extraordinary facilities for bibliographical research, it is proposed to commence the work there. All the titles which this library can furnish will be written out upon cards, made for the purpose, measuring about eight inches by six. When these have been carefully revised and copied, they will, if it be desired, be sent in small parcels to each of the subscribers for their inspection and remarks. When the work is completed, so far as the library of the British Museum can furnish the materials, Mr. Stevens will himself visit each of the other libraries for which he shall have received subscriptions, comparing and revising the titles, and adding such other books as he may find, which had not been previously described.

5. It is hoped that sufficient force can be advantageously employed upon the work, to prepare it for the press in eighteen months.

Publication of the Work.

When the manuscript of the work shall have been completed, according to the plan detailed above, it is to be delivered to the Secretary of the Smithsonian Institution, at Washington, who will, in accordance with the rules of the institution as published in the *Programme of Organization*, of December 8, 1847, submit it to a commission of competent judges. If this commission report favorably as to the faithful execution of the work, it is to be published and distributed at the sole expense of the Smithsonian Institution, constituting one or more volumes of the quarto series of Smithsonian Contributions to Knowledge, similar in form and style of execution to the first volume, about to be published. It will be uniform with the quarto edition of the United States Exploring Expedition.

BOSTON, *July* 7, 1848.

GENTLEMEN: I beg leave to offer for your consideration the enclosed plan of a Bibliographia Americana, and to solicit for the enterprise the patronage and encouragement of the Smithsonian Institution.

I have the honor to be, gentlemen, your obedient and humble servant.

HENRY STEVENS.

Prof. JOSEPH HENRY,
Secretary of the Smithsonian Institution.
Prof. CHARLES C. JEWETT,
Librarian of the Smithsonian Institution.

SMITHSONIAN INSTITUTION,
Washington, July 17, 1848.

We highly approve of the foregoing plan of the Bibliographia Americana, submitted to us by Henry Stevens, esq., accompanying his note of July 7, 1848, and certify that the work will be accepted for publication in the Smithsonian Contributions to Knowledge, provided the execution is found satisfactory to a commission of competent judges, appointed by the Institution for its examination.

JOSEPH HENRY,
CHARLES C. JEWETT.

Letter addressed to several gentlemen.

SMITHSONIAN INSTITUTION, *July* 14, 1848.

MY DEAR SIR: Mr. Henry Stevens has submitted to me, as Secretary of the Smithsonian Institution, his proposition to prepare a bibliographical account of books relating to or printed in America prior to 1750, the details of which he informs me have been submitted to you. I beg leave to request an expression of your opinion as to the importance of such a work, and whether it would be of sufficient interest to the student of American history to warrant its publication in the series of volumes forming the Smithsonian Contributions to Knowledge.

My object in making this request is to satisfy myself as to the propriety of giving Mr. Stevens the necessary encouragement on the part of the Institution to commence the preparation of the work. In conformity with the rules adopted, it will not be accepted for publication by the Institution unless it be approved of as to character and execution by a commission of competent judges.

I remain respectfully and truly, yours,

JOSEPH HENRY,
Secretary Smithsonian Institution.

WASHINGTON, *July* 15, 1848.

DEAR SIR: You do me the honor in your note of yesterday's date to request my opinion respecting Mr. H. Stevens's plan of "a bibliographica account of books relating to, or printed in America prior to the year 1700."

Mr. Stevens has, as you understand, been so kind as to acquaint me with the details of his plan. I take great interest in its success. Executed in the manner in which it will be by Mr. Stevens, the work will, I conceive, constitute a contribution to our literature, of great value, and richly deserve a place in the series of volumes proposed to be issued by the Smithsonian Institution.

I have the honor to be, dear sir, with great respect and esteem, your obedient servant,

JOHN G. PALFREY.

Prof. J. HENRY.

WASHINGTON, *July* 15, 1848.

MY DEAR SIR: I have examined Mr. Stevens's plan for a Bibliographia Americana, and believe it to be an excellent one. * * * *

As an evidence of my belief in the importance of the work and of Mr. Stevens's qualifications for preparing it for the press, I may refer to the fact that I have subscribed two hundred and fifty dollars towards it upon the terms detailed in Mr. Stevens's prospectus.

Yours, very truly,

PETER FORCE.

Prof. JOSEPH HENRY,
Secretary of Smithsonian Institution.

CAMBRIDGE, *July* 24, 1848.

MY DEAR SIR: You ask my opinion of Mr. Stevens's plan of a bibliographical account of books relating to America, and of those printed in America prior to 1700. Having examined his plan, and from the nature of my studies having attended much to this subject, I cannot hesitate to express the belief that such a work completely and faithfully executed, would be a most important acquisition to our historical literature. He proposes not only to give the titles of the books, but to inspect every work, and to add bibliographical remarks to such as require illustrations of this kind, and moreover to indicate the principal libraries in which they may be found.

Many of these books are extremely rare, and are scattered in various libraries. I think it may be with safety affirmed, that not a single work on the first settlement and early history of any one of the old States has been written with the use of all the books relating to the subject; first, because in many cases, the authors did not know of the existence of the books; and secondly, because when they possessed this knowledge they had no means of ascertaining where the books could be found. Hence all the books relating to our early history, written in modern times, are more or less defective and erroneous, even where the authors have done their best to secure fullness and accuracy. It is easy to perceive what advantage these writers would have derived, and the public through them, from a work like the one proposed.

For use in libraries it will also be of great value, serving not only as a catalogue of all the books relating to America in any library, but likewise of all in which it is deficient, thereby enabling librarians to ascertain this deficiency at a single glance, and to supply it as occasions may arise.

If I may judge from my own experience, the want of such a book is more extensively felt than may at first be imagined. During the last few years I have had innumerable applications from persons making historical researches in various parts of the country, requesting me to point out materials and their sources.

Mr. Stevens possesses uncommon facilities for executing the task. He has been educated at one of our principal universities, and his employment in collecting and purchasing this class of books for the British Museum, and other libraries, has given him a practical knowledge essential to this undertaking, and which can scarcely be attained by any other individual, as the same combination of circumstances is not likely again to occur.

The sale of the work must necessarily be limited, and can not possibly pay the cost of preparing it for the press, or of its publication, and I think I am not deceived in the impression, that few works in the literary class are more worthy of the patronage of the Smithsonian Institution, or more in accordance with its original design.

I am, dear sir, with great respect and regard, very truly, yours,

JARED SPARKS.

JOSEPH HENRY, LL.D.,
Secretary of Smithsonian Institution.

SENATE U. S., *August* 4, 1848.

DEAR SIR: Mr. Stevens's prospectus of his Bibliographia Americana has been submitted to the Joint Committee on the Library. They approve his plan, and thinking it worthy of such encouragement as they can give, have subscribed two hundred and fifty dollars, on the terms mentioned in the prospectus, it being also understood that for this sum he will catalogue such books on America, in the Library of Congress, as are within the period proposed by him.

Very respectfully, your obedient servant,

J. A. PEARCE.

ANTIQUARIAN HALL,
Worcester, September 23, 1848.

DEAR SIR: I addressed a line to Mr. Stevens some weeks since, informing him that the council of the American Antiquarian Society would subscribe two hundred and fifty dollars towards the expense of preparing his Bibliographia Americana. Yesterday I received his acknowledgement, in which he expresses his satisfaction with the amount, and states that the work meets with every encouragement he could wish; the subscription having nearly reached the sum of five thousand dollars.

I presume this contribution by the council of the Antiquarian Society will be regarded as the best evidence of *their* estimate of the importance of the proposed work, and of their confidence in the manner of its execution under the patronage and supervision of the Smithsonian Institution.

Very respectfully and truly yours,

SAML. F. HAVEN.

Prof. JOS. HENRY.

APPENDIX B.

To the Regents of the Smithsonian Institution:

GENTLEMEN: The apparatus for the purpose of scientific illustration and investigation which I had been for many years accumulating while occupying the chair of chemistry in the University of Pennsylvania, on my retiring from that office was replaced by another apparatus belonging to my successor. Under these circumstances, I signified my willingness to bestow mine on any institution for the promotion of science which would give it suitable apartments and cases, so as to have it kept in due order, and to render it available for the advancement of scientific knowledge.

Subsequently, Professor Henry, the distinguished Secretary of the Institution over which you are the legitimate guardians, suggested to me that I should offer my apparatus to that Institution in the following complimentary language: "I hope you will conclude to present it to the Smithsonian Institution. Several of the articles belong to the history of the science of our country, and would be interesting mementos of the past which should be preserved in some public institution." In reply, I wrote informing him that it would be agreeable to me to comply with his proposal, it being understood that the cost of the removal of the apparatus and of its being put in good order should be defrayed by the Institution, so that while, on the one hand, I should receive nothing, on the other, I should not be at any expense; also, that suitable apartments and cases should be provided for the keeping and using of the apparatus for the purpose of investigation and illustration.

Having been subsequently advised that you were willing to do me the honor of accepting the apparatus on these terms, I put it at the disposal of the Secretary, leaving it to his discretion to reject all that might not be considered of use to the Institution. I did not deem it proper that I should determine how far articles, which I had preserved under the idea of a contingent utility, might be worthy of the cost of transportation and of the space which they would occupy in the buildings of the Institution. I understand that Professor Henry gave to Mr. De Beust, for many years employed as my laboratory assistant, directions to pack up all that might, in his opinion, be useful in the way of research or illustration.

Agreeably to these directions, the apparatus was packed up last summer during my absence. I owe it to myself to state these circumstances, as it may happen that every body may not consider all the articles packed up by my assistant as meriting the honor done to them by their transfer to the halls of the Institution.

I am, gentlemen, very respectfully, your obedient servant,

ROBT. HARE.

WASHINGTON, *January* 3, 1848.

APPENDIX C.

Extracts from Communications from Professor Guyot to the Secretary of the Smithsonian Institution.

There is no man of science who does not deplore the want of uniformity in the scales of scientific instruments adopted by different civilized nations. The comparisons between the observations, made in different countries—comparisons indispensable in establishing the general results to which meteorology aspires—are at present impossible, except by means of reductions, which are a source of errors in calculation, (against which it is difficult to guard,) and which impose heavy labor and a considerable loss of time. It is therefore very desirable, for the interest of meteorology, that a uniform system of annotation should be established.

Of the three systems now in use for thermometric and barometric scales, (the Reaumur and the French inch, the Fahrenheit and the English inch, and the centigrade with the millimetre,) that to which preference is generally given on the continent of Europe, is the centigrade and the metric system. Germany is gradually abandoning the Reaumur division and the French inch for the centigrade and the millimetre. In some of its most important scientific works, as the Meteorology of Kaemtz, several memoirs of Dove, the Physical Atlas of Berghaus, and the accompanying text the latter have been adopted. By degrees, Italy is doing the same, and we shall soon have for choice only the Fahrenheit and the English inch on one hand, and the centigrade and the millimetre on the other.

But to which of these two systems ought we to give the preference? I do not hesitate to say, to the second. It is the most rational and the most convenient, it is that which has the greatest chance of uniting all suffrages and of becoming universal. But it is reserved to America to settle this question. Her weight in the balance will be decisive. If, renouncing the system she has inherited from England, she adopts the centigrade and metric scales, the scientific world may hope soon to arrive at that uniformity in measures so desirable. England would not be able to hold out long alone.

It would be worthy of the Smithsonian Institution, which owes its origin to a love of science transcending all spirit of nationality, to take here the initiative, which its position, so perfectly independent, permits. The adoption of these scales for the numerous instruments, which it intends to spread over the whole surface of the United States, together with the regular publication of observations under this form, will soon compel all observers to conform to it. I am not ignorant of the objections which might be urged against this measure, nor do I undervalue them. Nevertheless, I believe that I should be able to meet them, and I would do so in advance, did I not fear to extend this communication beyond suitable limits.

The co-operation of Professor Bache would be of very great importance. As superintendent of the coast survey, he has a number of publications to make on the temperature of the sea at different depths, for example, and others, for which it would be useful to adopt the centigrade scale, or at least to place the centigrade opposite to the Fahrenheit degrees. This scientific authority, joined to that of the Smithsonian Institution would, I doubt not, be sufficient to introduce gradually so desirable a reform. The moment is critical—later, a change would be almost impossible.

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The importance which the subject of the change of scales seems to me to possess, and the exigency of the moment, induce me to offer some further considerations thereon, for which I crave your indulgence.

Uniformity of notation in all scientific works is the essential and immediate result at which we should aim. We might, strictly speaking, admit any scale, provided it were universally adopted; but since, among the number of those which have been proposed, there are three which have divided the suffrages, it is from among these that we should select. Other things being equal, two reasons (as I have already remarked) it seems to me should determine our choice; the first is the relative perfection of the scale; the second is the probability of its adoption by all men of science.

As to the first point, the centigrade scale has the advantage over the two others of being in harmony with the decimal system, and of facilitating calculations. It has the advantage over the Fahrenheit of possessing a natural zero, a point of departure fixed by nature herself, easy to determine, and which corresponds to a point of temperature so critical, that from the moment of reaching it, meteorological phenomena are suddenly and profoundly modified, vegetation ceases, and all nature assumes another aspect. It is then highly proper that this temperature, which is a point of change marked by nature herself, be also the principal one on the thermometric scale.

The English adduce, as one of the reasons which causes them to retain the Fahrenheit scale, the absence of negative quantities. This, it is true, is an advantage; for I admit that the mixing of negative and positive quantities is a source of error, and embarrasses the calculation. But this advantage, which is real, disappears the moment we wish to make a universal one of the Fahrenheit scale, for in nearly half the countries of the earth, and particularly in North America, the Fahrenheit thermometer furnishes every year many negative quantities. It has been said further, that the Fahrenheit degree, measuring a smaller difference of temperature, allows of a more exact reading than the centigrade. But it is only requisite to mark half degrees upon the centigrade scale in order to obtain, the tubes being equal, a still greater approximation, that is to say, according to the ordinary method of estimation of twentieths of degrees; which is much more than it is right to demand of instruments destined for meteorological observations, since various causes prevent, even with the best, that one could guarantee the temperature of the air within two or three tenths of a degree.

But the strongest reasons for the adoption of the centigrade scale are, without contradiction, the predominance already secured to it in the greater part of the scientific world, the considerable amount of meterological labors in which it is employed, and the decided tendency continually to extend itself. America has not here to open a new path, she has only to associate herself with the movement which is carrying scientific Europe along with it. But I repeat, her influence will be decisive, she holds in her hands the future, and if she well understands her part, here as in other domains, she should break with the past in its narrowness, and render herself cosmopolitan in the interest of general utility.

What I have just said applies equally to the barometric scale. The metrical scale is the most convenient; it is rational, easy to verify, invariable; it has also the future in its favor.

There remain to be considered material difficulties which attend every change of system. I will take the liberty of calling your attention to the fact that they only concern other institutions. The Smithsonian Institution is perfectly free to take the course which may seem to it most in accordance with the interests of meteorology. It has, moreover, a right here to an influence proportioned to its expenditures in this department. If, for example, it takes upon itself the gratuitous publication of the observations made in stations already existing, may it not in time claim to regulate also the form of these observations.

Besides, the question is not about changing at once the habits of the people, put simply those of scientific observers, which is a very different affair. The detailed publication of the observations will principally circulate in the scientific world for which it is designed: But nothing would prevent the publication, for some time to come, of reports of general results with the old scales opposite the new.

I am, sir, your very obedient servant,

A. GUYOT,

JOSEPH HENRY, LL. D.,
Secretary of the Smithsonian Institution.

31st Congress,
1st Session.

[SENATE.]

Miscellaneous,
No. 120.

FOURTH ANNUAL REPORT

OF THE

BOARD OF REGENTS

OF

THE SMITHSONIAN INSTITUTION,

TO

THE SENATE AND HOUSE OF REPRESENTATIVES,

SHOWING

THE OPERATIONS, EXPENDITURES, AND CONDITION OF THE INSTITUTION

DURING THE YEAR 1849.

July 29, 1850.
Read.

July 30, 1850.
Ordered to be printed, and that 5,000 additional copies be printed without the appendix, 500 of which are for the Smithsonian Institution.

WASHINGTON:
PRINTED BY THE PRINTERS TO THE SENATE.
1850.

Smithsonian Institution,
July 26, 1850.

Sir: I have the honor herewith to transmit to you the annual report of the Board of Regents of the Smithsonian Institution, and beg leave to request that you will present the same to the Senate of the United States.

I am, very respectfully, your obedient servant,

JOSEPH HENRY,
Secretary S. I.

Hon. William R. King,
President United States Senate.

OFFICERS, &c. OF THE SMITHSONIAN INSTITUTION.

ZACHARY TAYLOR,
Ex officio Presiding Officer of the Institution.

MILLARD FILLMORE,
Ex officio second Presiding Officer of the Institution, and, by election, Chancellor of the same.

JOSEPH HENRY,
Secretary of the Institution.

CHARLES C. JEWETT,
Assistant Secretary, acting as Librarian.

EDWARD FOREMAN,
Assistant.

WILLIAM W. SEATON, ALEX'R D. BACHE, JAMES A. PEARCE,	*Executive Committee.*
JEFFERSON DAVIS, WILLIAM W. SEATON, HENRY W. HILLIARD,	*Building Committee.*

JAMES RENWICK, Jr., *Architect.*

GILBERT CAMERON, *Contractor.*

LIST OF REGENTS OF THE INSTITUTION.

MILLARD FILLMORE,
Vice President of the United States.

ROGER B. TANEY,
Chief Justice of the United States.

WILLIAM W. SEATON,
Mayor of the city of Washington.

JAMES A. PEARCE,
Member of the Senate of the United States.

JEFFERSON DAVIS,
Member of the Senate of the United States.

JAMES M. MASON,
Member of the Senate of the United States.

HENRY W. HILLIARD,
Member of the House of Representatives.

GRAHAM N. FITCH,
Member of the House of Representatives.

WILLIAM F. COLCOCK,
Member of the House of Representatives.

RUFUS CHOATE,
Citizen of Massachusetts.

GIDEON HAWLEY,
Citizen of New York.

WILLIAM C. PRESTON,
Citizen of South Carolina.

RICHARD RUSH,
Citizen of Pennsylvania.

ALEXANDER D. BACHE,
Member of Nat. Inst., Washington.

JOSEPH G. TOTTEN,
Member of Nat. Inst., Washington.

MEMBERS EX-OFFICIO OF THE INSTITUTION.

ZACHARY TAYLOR,
President of the United States.

MILLARD FILLMORE,
Vice President of the United States.

JOHN M. CLAYTON,
Secretary of State.

WILLIAM M. MEREDITH,
Secretary of the Treasury.

GEORGE W. CRAWFORD,
Secretary of War.

WILLIAM B. PRESTON,
Secretary of the Navy.

JACOB COLLAMER,
Postmaster General.

REVERDY JOHNSON,
Attorney General.

ROGER B. TANEY,
Chief Justice of the United States.

THOMAS EWBANK,
Commissioner of Patents.

WILLIAM W. SEATON,
Mayor of the city of Washington.

HONORARY MEMBERS.

ROBERT HARE,

*ALBERT GALLATIN,

BENJAMIN SILLIMAN,

WASHINGTON IRVING.

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* Dead.

FOURTH ANNUAL REPORT
OF
THE BOARD OF REGENTS
OF
THE SMITHSONIAN INSTITUTION,
SHOWING

The operations, expenditures, and condition of the Institution up to January 1, 1850.

To the Senate and House of Representatives:

In obedience to the act of Congress of August 10, 1846, establishing the Smithsonian Institution, the undersigned, in behalf of the Regents, submit to Congress, as a report of the operations, expenditures, and condition of the institution, the following documents:

First. Annual report of the Secretary, giving an account of the operations of the institution during the year 1849, accompanied by a report from the Assistant Secretary, relative to the library, and by other documents.

Second. Report of the Executive Committee, exhibiting an account of the expenditures of the institution during the year, and of its financial condition on the first of January, 1850.

Third. Report of the Building Committee, relative to the progress made in 1849 in the erection of the Smithsonian edifice, and in the improvement of the grounds, with a statement of the expenditures which have thus far been made on the same.

Fourth. Proceedings of the Board of Regents at their fourth annual session.

Fifth. Proceedings of the first meeting of the establishment.

Sixth. Appendix.

From these documents it will be seen that the Smithsonian Institution has been gradually extending its sphere of usefulness in carrying out the plan of its organization.

An accident which happened to one of the apartments of the building, as will be seen from the proceedings of the board, has induced the Regents to change the original plan of finishing the interior, and to adopt in its stead a system of fireproofing, better adapted to security and permanence. This will be attended with an additional expense, which it is proposed to meet by an extension of the time of completing the building.

From the report of the Executive Committee it will be perceived that the funds of the institution are in a very favorable condition, and from the proceedings of the Regents that the Secretary has been directed to make application to Congress for permission to increase the principal of the Smithsonian fund, by adding thereto $150,000 of accrued interest now on hand, and such other sums as may hereafter come into the possession of the Regents, by donation or otherwise, until the sums so added to the original bequest shall amount to $200,000.

The presentation of this report to Congress has been delayed beyond the usual time, on account of the continued session of the board, rendered necessary by the protracted investigations relative to the building.

MILLARD FILLMORE,
Chancellor, &c.
JOSEPH HENRY,
Secretary.

ANNUAL REPORT OF THE SECRETARY.

To the Board of Regents of the Smithsonian Institution:

GENTLEMEN: In accordance with the resolution that the Secretary shall present at each annual meeting of the Board of Regents an account of the operations of the institution during the past year, I respectfully submit the following:

Agreeably to the scheme of finance adopted by the board, the greater portion of all the income of the Smithsonian fund is at present devoted to the erection of the building; and until this is paid for, the money which can be appropriated to the active operations of the institution will be comparatively small; not only small in proportion to the demands made upon it, but small in reference to the results which the public generally expect it to produce. It is believed, however, that a proper consideration of the facts presented in the following report will warrant the conclusion, that the institution, during the past year, has been gradually extending its sphere of usefulness, and successfully bringing into operation the different parts of its plan of organization.

It will be recollected that the several propositions of the programme were adopted provisionally, and it is gratifying to be able to state that experience thus far has indicated no important changes. The general plan has continued to receive the approbation of the enlightened public both in this country and in Europe, and to increase general confidence in the power of the institution to confer important benefits on our country and the world.

In presenting the different operations of the institution, I shall adopt, as in my last report, the principal divisions of the programme:

1st. Publication of memoirs in quarto volumes, consisting of positive additions to knowledge.

2d. Institution of original researches, under the direction of competent persons.

3d. The publication of a series of reports, giving the present state and progress of different branches of knowledge.

4th. Formation of a library and museum of objects of nature and art.

5th. Lectures.

Publication of Memoirs.

Agreeably to the plan of the institution, these memoirs are intended to embody the results of researches which could not otherwise be readily published, and are to be distributed to societies, public libraries, and other institutions. An account of the first memoir was given in the last report. It relates to the ancient monuments of the Mississippi valley, and occupies an entire volume. It has been presented, as far as opportunity would permit, to the principal literary and scientific societies of the world, to all the colleges and larger libraries of this country, and has everywhere been received with much commendation. All the societies from which we have as yet heard, have declared their willingness to co operate with the institution, and to give us their publications in exchange, from which source our library has already been enriched with valuable additions.

It is to be regretted that our means would not permit us to distribute the first volume more liberally than we have done, and that the price put upon the copies offered for sale has placed them beyond the reach of many persons desirous of obtaining them. This arose from the fact that in order to remunerate the authors for the expense and labor bestowed on the memoir, they were allowed to strike off from the types and plates of the institution an edition to be sold for their own benefit. To avoid risk of loss, the edition was a small one, and the price put at ten dollars. An occurrence of this kind will not happen again; for, although it would be desirable to pay authors for their contributions, yet it is now found that materials will be offered, free of all cost, more than sufficient to exhaust the portion of the income which can be devoted to publications.

In printing the future volumes it will be advisable to strike off an extra number of copies for sale on account of the institution, and to dispose of these for little more than the mere cost of press-work and paper.

The second volume of Contributions is now in the press, and will consist of a number of memoirs which have been submitted to competent judges and found worthy of a place in the Smithsonian publications. In this volume we have adopted the plan of printing each memoir with a separate title and paging. The object of this is to enable us to distribute extra copies of each memoir separately, and also to furnish the author with a number of copies regularly paged for his own use. It will also enable us to classify the memoirs according to subjects.

The following is a brief account of the memoirs contained in the second volume, so far as they have been reported on by the commissioners to whom they have been submitted:

1. *A Memoir on the planet Neptune, by Sears C. Walker.*—An abstract of this memoir has been published in the proceedings of the American Philosophical Society, and has received the approbation of the scientific world. It presents the several steps of the discovery of an orbit which has enabled Mr. Walker to compute the place of the new planet with as much precision as that of any of the planets which have been known from the earliest times.* Starting from the observations of the motion of the planet during a period of about four months, Mr. Walker calculated an empirical orbit which enabled him to trace its path among the stars of the celestial vault through its whole revolution of 166 years. He was thus enabled to carry its position backward until it fell among a cluster of stars accurately mapped by Lalande towards the close of the last century, and, after a minute and critical investigation, he was led to conclude

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* It is proper to state that a part of the researches given in this memoir was made during the author's connexion with the National Observatory, under the direction of Lieutenant Maury. An account of these will probably soon be published in the next volume of the records of operations of this observatory.

that one of the stars observed by Lalande on the night of May 10, 1795, was the planet Neptune. This conclusion was rendered almost certainty by the observation, made on the first clear night, that all the stars in the cluster above mentioned were found in place, except the one previously fixed upon as the new planet. Some doubt was created, however, by noting that the missing star in Lalande's maps was marked as doubtful. In order to settle this difficulty, the original manuscript of the astronomer deposited in the observatory of Paris was referred to. It was then found that Lalande had twice observed the same star; and not finding the right ascension and declination each time the same, and not dreaming it was a planet, he selected one of the observations for publication, marking the position indicated doubtful. The planet had moved during the interval of observation, and thus produced the discrepancy. By allowing for the movement during the time elapsed, the two observations precisely agree. There could, therefore, be no longer any doubt that this star, observed and mapped fifty years ago as a fixed star, was in reality the planet Neptune. Mr. Walker, availing himself of this discovery, had now a series of observations embracing not a few months of the motion of the planet, but which carried it back fifty years. From these data he was enabled to deduce a pure elliptical orbit, or one which the body would describe were there no other planets in the system. This orbit has been investigated by another of our countrymen in a series of profound and beautiful researches, adding much to our knowledge both of Neptune and Uranus. I allude to the labors of Professor Peirce, of Cambridge.

It is well known that the planet Neptune was discovered by mathematical deductions from the perturbations observed in Uranus, and that Leverrier and Adams, the independent authors of this discovery, not only pointed out the direction in which the unseen planet was to be found, but also, from *a priori* considerations, gave the dimensions, form, and position of the orbit it describes around the sun. The direction indicated was the true one, but the elements of the orbit were widely different from those subsequently found to belong to the actual orbit of the planet. Professor Peirce submitted the data used by Leverrier and Adams to a new and critical examination, and succeeded in discovering the cause of their error, and of verifying the conclusions of Mr. Walker. He afterwards proceeded to consider the inverse problem, viz: that of deducing the perturbations which Neptune ought to produce in the planet Uranus. His final results gave a perfect explanation of all the anomalies in the motions of Uranus, and furnished the data, for the first time since its discovery in 1781, for correct tables for determining its position in the heavens. Professor Peirce also investigated the action of all the other planets on Neptune, and his results enabled Mr. Walker, by applying them to his elliptical orbit, to compare the actual with the calculated place of the planet. This led to a further correction of the elliptical orbit, and a more perfect table of calculated places. In this way, by a series of profound and beautiful investigations, alternately combining the data of observation with theoretical considerations, these two astronomers have perfected our knowledge of the motion of the most distant planets of our system, and furnished the means of giving their past and future position through all time. The details of Mr. Peirce's paper have not yet been prepared for the press. They will probably be given in due time to the world as a part of the Smithsonian Contributions.

The investigations mentioned in the foregoing account have been attended with very laborious arithmetical calculations. A small appropriation has been made to defray, in part, the expense of these. Indeed, without the aid thus given, the discoveries we have related would scarcely have been made—at least at this time, and in our country.

2. The next memoir is *an account of the discovery of a comet by Miss Maria Mitchell, of Nantucket*, with its approximate orbit, calculated by herself. The honor of this discovery has been duly awarded to the author. A medal has been presented to her by the King of Denmark, and the comet itself is now known to astronomers in every part of the world by her name. From the peculiarities of the case, the Executive Committee recommended that a small premium be presented to Miss Mitchell.

3. The third memoir is *on a new method of solving cubic equations, by Professor Strong, of New Brunswick, New Jersey;* a purely mathematical paper, which has been pronounced an interesting addition to that branch of science.

4. The fourth memoir is *a contribution to the physical geography of the United States.* It presents a section, from actual surveys, of the descent of the bed of the Ohio river from its source, in the State of New York, to its mouth, on the Mississippi. By a series of observations and elaborate calculations, the author exhibits the amount of water which passed down the river during a period of eleven years prior to 1849. This, compared with the amount of rain which fell during the same time on the surface drained by the river, gives a series of interesting results in reference to evaporation.

It also contains a proposition for improving the navigation of the Ohio, founded upon data given in the preceding part of the memoir. Whatever may be the result of the plan here proposed, this memoir has been recommended for publication as a valuable addition to the physical geography of the United States. The author is Charles Ellet, jr., the celebrated engineer of the wire bridges over the Niagara and Ohio rivers. Another memoir is promised by the same author, which will be a continuation of the same subject.

5. The fifth memoir is contributed by Dr. Robert Hare, of Philadelphia, and is intended to elucidate the remarkable phenomenon exhibited at the great fire in the city of New York on the 19th of July, 1845, during which two hundred and thirty houses were destroyed, containing merchandise amounting in value to sixty-two millions of dollars. "A series of detonations, successively increasing in loudness, were followed by a final explosion which tore in pieces the building in which it took place, threw down several houses in its vicinity, and forced in the fronts of the houses on the opposite side of the street." These effects were attributed to gunpowder, though the owner of the building in which the explosion occurred declared that none of this article was present, but that the house contained a large quantity of nitre, in connexion with merchandise of a combustible nature.

This memoir contains a series of investigations relative to the explosions which may be produced by heated nitre in connexion with carbonaceous matters. The author shows, by numerous experiments, that explosions of a violent kind can be produced by forcibly bringing into contact at a high temperature, nitre, and substances of an inflammable character. It also contains several new experiments on the combustion of gunpowder under different circumstances.

6. The sixth memoir is *on the ancient monuments of the State of New York, by E. G. Squier*, and may be regarded as a continuation of the memoir by Squier and Davis on the ancient monuments of the Mississippi valley. The expense of the explorations which form the basis of this memoir was two hundred dollars, one half of which was defrayed by the members of the Historical Society of New York, and the remainder by this institution.

7. Another memoir is by Professor Secchi, a young Italian of much ingenuity and learning, a member of Georgetown College. It consists of a new mathematical investigation of the reciprocal action of two galvanic currents on each other, and of the action of a current on the pole of a magnet. It begins with the assumption that the force between the elements of the currents and the magnet is inversely as the square of the distance, and directly as the sine of the inclination, and then presents the mathematical inferences which legitimately flow from these data. The deductions are of such a nature that the author has been able to verify them by means of well devised experiments, and the results accord as nearly with the deductions as the complex nature of the subject will admit. The investigations involve the mathematical theory of the galvanometer, and the experiments furnish much interesting and useful information, aside from the principal object of the memoir, particularly on the comparative value of different kinds of batteries.

8. The next paper is by Professor Louis Agassiz, of Harvard University, and is entitled *The Classification of Insects upon Embryological Data.* It gives an account of a series of new and interesting facts observed by the author relative to the metamorphosis of insects, which have an important bearing on general questions in zoology, and which will probably lead to the arrangement of these animals according to a new system of classification, founded upon more definite principles than those heretofore adopted.

9. The next is a memoir by Dr. R. W. Gibbes, on the *Mosasaurus* and some new allied genera of the gigantic lizards which formerly inhabited our planet, and of which the remains are now found in different parts of the United States, particularly in the marl beds of various parts of the country. This is an interesting addition to palæontology, and has received a favorable report from the commission to whom it was referred.

Researches.

The programme of organization contemplates the establishment of researches, under the direction of suitable persons, the expense to be borne in whole or in part by the institution. In the last report it was mentioned that a telescope and other apparatus had been ordered for Lieutenant Gilliss in his astronomical expedition to Chili, and that, without this assistance, the expedition would have been delayed a year. I am now, however, happy to state that the expense of these instruments has since been paid by an appropriation of Congress; and the institution has thus been the means of promoting the objects of the expedition without any expenditure of its income. Certain improvements in astronomical instruments, however, have been made since the departure of Lieutenant Gilliss which would much facilitate his observations, and enable him to do much more with his small number of assistants, and it may be well for the institution to furnish him with instruments of this kind.

Under the head of researches it may also be mentioned that, during the past year, we have caused to be computed, at the expense of the institution, an ephemeris of Neptune, giving the position of the planet in the heavens from August 4, 1846, to February 4, 1848, and also in the last half years of 1848 and 1849. This ephemeris is based on the orbit of Neptune established by Mr. Walker and corrected by the perturbations of the planet Neptune by the action of Jupiter, Saturn, and Uranus, as deduced from the mathematical investigations of Professor Peirce, of Harvard University.

We have distributed copies of this ephemeris to all persons known to us who are interested in practical astronomy, not only in this country but in Europe. It has been received with high commendation, and is found to give the actual place of the planet in the heavens within the limits of a few tenths of a second of arc; indeed, the coincidence of the calculated and observed places is so marked, that, were the actual planet of the heavens and that of the ephemeris to be considered as a double star, they would have so close a proximity that no telescope yet constructed could separate them.

Occultations for 1850.

A set of tables in continuation of those mentioned in the last and preceding report for facilitating the calculation of the appearance of occultations of fixed stars by the moon during the year 1850 has been prepared by Mr. Downes, of Philadelphia, and published by the institution. At the last session of Congress an appropriation was made for establishing a Nautical Almanac, which will furnish, among other aids to astronomical observation, sets of tables of the kind just mentioned. Lieut. Davis, of the United States navy, to whom the superintendence of this national work has been intrusted, recommended that the expense of the preparation of the tables for 1850 should be defrayed from the appropriation for the almanac; and this recommendation has been concurred in by the Secretary of the Navy. The institution has, therefore, been called upon merely to pay for the printing and distribution of the tables, and thus again enabled, with a small outlay of its funds, to afford important facilities for the advance of science.

Meteorology.

Under the general head of researches we may also give an account of the progress made in establishing the system of meteorological observations proposed in the preceding reports. Circulars describing the plan of operation were distributed to the several parts of the Union through members of Congress at the last session, and the results fully equalled our anticipations. From localities widely separated from each other, and distributed over the greater portion of the United States, about one hundred and fifty monthly returns are now regularly received. To carry on this system efficiently, much labor is necessarily required in the way of correspondence; but it bids fair to furnish the institution with a wide field of usefulness in bringing it into communication with individuals who, though secluded in position, are desirous of improving themselves, as well as of promoting general knowledge. The correspondence we have thus established, and which we hope to extend, through the aid of the members of the present Congress, will enable us to acquire definite information on a variety of subjects besides those which relate to meteorology. We have already accumulated in this way a mass of curious and instructive information relative to various subjects, which we hope, in the progress of the development of the plan of the institution, to digest and present to the public.

We would mention in this connexion that two of our meteorological correspondents have proposed the collection of statistics of diseases, including the rise, progress, and decline of epidemics. This is a subject we would commend to the American Medical Association. The Smithsonian Institution could assist in an enterprise of this kind by receiving the information which is attainable, and collating it, under the direction of a committee of gentlemen belonging to the medical profession.

It will be recollected that our plan of meteorological observations embraces three classes of observers—one to record the changes in the aspect of the sky, the direction of the wind, beginning and ending of rain, snow, &c.; another, in addition, to give an account of the changes of temperature indicated by the thermometer; and a third, furnished with a full set of instruments for recording the most important atmospheric changes. The importance of the information which may be derived from a careful record of the weather without instruments can scarcely be realized by persons who have given but little attention to the subject. The place of origin, direction, velocity of motion of a storm, as well as the direction and velocity of the wind which composes it, whether gyratory or inward and upward, may all be determined by a sufficient amount of data of the kind we have mentioned. Also, a careful record of the observations of meteors seen by individuals from different positions would furnish interesting data for determining the elevation and velocity of these mysterious visitors.

There are other data which can only be obtained by the use of accurate instruments: fortunately, however, a comparatively small number of observers are sufficient for determining these. The instruments should be of the best possible construction, placed in important situations, observed at suitable times and with undeviating regularity by competent observers. Few persons are acquainted with the difficulty of procuring accurate meteorological instruments. The ordinary thermometers for sale in the shops frequently differ several degrees from each other, particularly at the higher and the lower temperatures, and even the same thermometer is liable, for a time after its construction, to undergo a change in the size of the bulb, and thus to derange the accuracy of the scale. An accurate barometer is another instrument which cannot readily be obtained, unless at too great a price for the means of ordinary observers. The common weather glasses, sold under the name of barometers, though they may be of use in indicating variations of atmospheric pressure, and thus assist in furnishing data for determining the progress of aerial waves, are inapplicable to the precise and accurate observations necessary to determine the minute changes of atmospheric pressure, or of ascertaining the height of places above the level of the sea.

Considerable pains have been taken during the past year to ascertain the best form of a barometer, which could be procured at a reasonable cost, and, after considerable inquiry and comparison of different instruments, we have at length decided upon one, with an adjustable cistern and enclosed in a brass case, which may be transported to a distance, and will serve as well for a mountain barometer as for indicating meteorological changes. For the construction of these instruments, we have employed Mr. James Green, formerly of Baltimore, now of New York; and in order that the instruments furnished by him to ourselves, or sold to our observers, may be comparable with each other, we have procured a standard barometer from London, with which each instrument, previously numbered, is accurately compared, and the record carefully preserved. We have also decided upon the forms of rain and snow gauges and wind vanes, and have ordered a number of these to be constructed by Benjamin Pike & Son, Broadway, New York.

It is the policy of the institution to do as much with its funds as possible, and to call in aid from every quarter whence it may be obtained. With reference to the system of meteorology, I am happy to inform the board that we have received assistance from a number of sources from which it could scarcely have been expected at the commencement of the scheme. The last Congress appropriated two thousand dollars for meteorology, to be expended under the direction of the Navy Department. It was understood that Professor Espy was to be engaged in the investigations to be made in accordance with this appropriation, and, in order that his labors might co operate with those of the institution, the late Secretary of the Navy directed him to apply to me for instructions. During the past year he has been engaged in directing observations and making preparation for a series of experiments having an important bearing on the explanation of meteorological phenomena. It is understood that the remainder of this appropriation, after paying the salary of Mr. Espy, will be expended in defraying incidental expenses, such as printing, engraving, &c.

The Regents of the University of the State of New York, in 1825, organized a system of meteorology, which has continued ever since, and which has added many interesting facts to the stock of scientific knowledge. In order to extend the usefulness of this system, the Regents of the University have lately resolved to reorganize the whole, and to supply the observers with accurate and well-compared instruments. This work has been intrusted to Dr. T. Romeyn Beck and one of our Regents, Gideon Hawley, esq., both of Albany. They have adopted the same system and instruments as those of the Smithsonian Institution, and have agreed to co-operate fully with us in the observation of the general and particular phenomena of meteorology. A similar movement has been made in the legislature of Massachusetts for the establishment of a system of observations, and it is hoped that the other States of the Union will follow these examples. We are also happy to state that the medical department of the army, under the direction of Surgeon General Lawson, has signified its willingness to unite with us in the same system, and to furnish the new military posts with instruments constructed on the same plan, and compared with the Smithsonian standard. We hope, therefore, within the coming year, that there will be established at least fifty stations in different parts of North America, furnished with accurate instruments of this kind.

During the past summer I visited Canada, principally for the purpose of examining the meteorological instruments and the method of using them employed at the observatory of Toronto. Captain Lefroy, the director of this institution, afforded me every facility for acquiring the desired information. He also furnished me with a list of military posts in Canada at which observations may be made, and gave assurance of the hearty co-operation in our labors of the officers attached to these posts. We have also a prospect of procuring permanent observations from Bermuda, some of the West India islands, and from Central America.

From all these statements it will be seen we are in a fair way of establishing a general system of meteorology, extending over a great portion of North America, including many stations furnished with compared instruments referred to the same standard. When fully organized, it will constitute one of the most important systems ever instituted; but to bring it fully into operation will require a judicious expenditure of all the funds at our disposal for this purpose. At the last session of the board, one thousand dollars were appropriated for meteorological purposes, the greater portion of which has been expended for instruments, among which are those to serve as standards; an equal sum, at least, will be required for the next year.

In connexion with the regular meteorological system, successful applications have been made to the presidents of a number of telegraph lines to allow us, at a certain period of the day, the use of their wires for the transmission of meteorological intelligence. We propose to furnish the most important offices along the lines with sets of instruments, and to give the operators special instructions for the observation of particular phenomena. It is hoped by this means to obtain results not otherwise accessible. Instruments for this purpose are now in process of construction, and as soon as they are completed the transmission of observations will commence.

The establishment of the extended system of meteorology, which we have just described, is a work of time and labor—the correspondence alone being sufficient constantly to occupy the time of one person, and the adjustment of the several parts of the plan has required more time than my other engagements would permit me to devote to it.

Magnetic Observations.

A set of magnetic apparatus was ordered from London for the purpose of determining the lines of magnetic intensity, declination, and inclination. These are intrusted to Colonel Emory, of the boundary commission, and in his possession they will probably be made to do good service in the cause of science. As soon as the funds will admit of the appropriation, it would be advisable to purchase several sets of instruments of the same kind, to be placed in the hands of the scientific explorers of our new territories, and for determining the principal magnetic lines across the United States.

Physical Geography.

Another subject of much interest connected with the physical geography of our country is the collection of the statistics of all railway and canal explorations which have been made in various parts of the United States and Canada. This information, at present in the possession of individuals, is of little value, and, unless collected by some public institution, will soon be lost to the world. Surveys of this kind furnish the most exact data for the determination of what may be called the mountain bases, or general water sheds of the surface; and no portion of the world of the same extent has been so thoroughly traversed with these explorations as the United States. Connected with these, sketches should be made of the principal mountain ranges, barometrical measurements of the higher peaks, with geological sections of the strata through which the public works are carried. For the purpose of commencing this collection, we have addressed letters to all persons within our knowledge who possess information of this kind, requesting memoirs from them containing results of their own measurements and observations. By this means we hope to present a series of papers of the same character as that of Mr. Ellet, and thus furnish materials for a more accurate physical map of North America, as well as the means, in connexion with our operations in meteorology, for a more exact study of our climate.

During the past year Professor Guyot has made a barometrical exploration of the mountain system of New Hampshire, and he purposes to devote a portion of each year to investigations of this kind.

Natural History.

Our new possessions in Oregon, California, and Mexico offer interesting fields for scientific inquiry, particularly in the line of natural history, and Dr. Gray, of Cambridge, and Dr. Engleman, of St. Louis, aided by several scientific gentlemen, interested in this branch of science, have sent a number of collectors to develop the resources of those regions, particularly so far as the botany is concerned.

Among these, Mr. Charles Wright has been engaged to make explorations during the past year in New Mexico, at the expense of a subscription by individuals and institutions. He has just returned laden with a valuable collection of plants, seeds, &c., which are to be divided among those who defrayed the expense. In behalf of the Smithsonian Institution $150 was subscribed towards this enterprise, and for this we are entitled to a full set of all the objects collected. These are to be submitted to Dr. Gray, of Cambridge, to be described in a memoir by him, and to be published in the Smithsonian Contributions. Mr. Wright is expected to start on another expedition early in the spring, for the purpose of making explorations in natural history in the regions around El Paso, and it will be well for the Smithsonian Institution to further assist this laudable enterprise with another subscription of an equal amount.

We have also purchased, for the sum of $20, a set of the plants collected by Mr. Fendler in the vicinity of Santa Fe, during the year 1847. This adventurous explorer, under the direction of the gentlemen previously mentioned, is now engaged in investigating the botany of the great valley of the Salt Lake; and it is proposed further to assist him by the purchase of a set of the collections he may obtain. By co-operating in this way with individuals and institutions, we are enabled, at a small expense, materially to advance the cause of science.

Ancient Monuments.

Another object, the prosecution of which falls particularly within the province of the institution, is that of obtaining descriptions of the ancient monuments of North America. Circulars have been sent to gentlemen in various parts of the country, requesting them to furnish surveys and explorations of mounds, and other ancient works, which are reputed to exist in their vicinity. To facilitate these investigations, we have requested the authors of the first volume to draw up, from the results of their experience, a set of instructions for the proper examination and description of works of this kind. The same subject has also been placed before several historical societies, established in places where mounds are known to exist. In connexion with this subject, we cannot too highly commend the policy of the new Territory of Minnesota, which, among the first of its acts, has established a Historical Society, to gather up the record of events as they occur, and thus to preserve the unappreciated facts of the present—destined to become history in the future. An important and interesting part of the labors of such societies would be the survey and exploration of the ancient monuments which might be found in their vicinity. Brief accounts of these might be published in the proceedings of the societies, while detailed descriptions and drawings could be given to the world at the expense and through the transactions of the Smithsonian Institution.

The publication of our first volume has awakened a lively interest in this subject, and we have received accounts of various locations of mounds and other ancient works in different parts of the country which were previously unknown. A gentleman, well qualified for the task, is now engaged in preparing for us an ethnological chart indicating the relative positions, as far as they are known, of all the monuments of this kind. This chart may be improved from time to time, and will be the means of eliciting important additional information. Indeed this whole subject should be prosecuted by the institution, until all accessible information has been collected. The Smithsonian Institution owes this to the world. The work should be done quickly, for the plough, as well as the elements, are every year rendering less visible the outlines and distinctive forms of these remnants of the arts and policy of the ancient inhabitants of this continent.

Bibliographia Americana.

In the last report an account is given of the preparation of a work on the bibliography of America, by Henry Stevens, of Vermont. This work, it will be recollected, is to contain a brief account of every book published in, or relating to, North America, prior to 1700, with references to the different libraries in this and other countries, in which these works are to be found. The institution agreed to publish this work at its own expense, provided, on examination by a commission of competent judges, it is found properly executed. Mr. Stevens is now engaged in the British Museum cataloguing all the works embraced in his plan, and informs me that he is making good progress in his enterprise.

Reports on the Progress of Knowledge.

Of the reports on the progress of knowledge proposed in the plan of organization, none have as yet been published, though several of those mentioned in my report of last year have been completed, or are very nearly ready for the press. The appropriations, however, for the last year were not found sufficient for carrying out further this part of the plan.

The most important report now in progress is that on the forest trees of North America, by Dr. Gray, Professor of Botany in Harvard University. It is intended in this work to give figures from original drawings of the flowers, leaves, fruit, &c., of each principal species in the United States proper, for the most part of the size of nature, and so executed as to furnish colored or uncolored copies—the first being intended to give an adequate idea of the species, and the second for greater cheapness and more general diffusion.

This work will be completed in three parts, in octavo, with an atlas of quarto plate—the first part to be published next spring. A portion of this will be occupied with an introductory dissertation giving the present state of our knowledge, divested as much as possible of all unnecessary technical terms—of the anatomy, morphology, and physiology of the tree—tracing its growth from the embryo to its full development and reproduction in the formation of fruit and seed. This will be illustrated by drawings from original dissections under the microscope, and sketches made, in every instance, from Nature. As the work will be adapted to general comprehension, it will be of interest to the popular as well as the scientific reader.

Report on the history of the discovery of the planet Neptune.—The first part of a report on recent discoveries in astronomy has been completed, and is ready for the press. This is written by Dr. B. A. Gould, of Cambridge, editor of the American Astronomical Journal. Copious references to authorities are given in foot-notes, which will render the work interesting to the professed astronomer as well as to the less advanced student.

A report has been prepared by Professor Guyot, late of the University of Neufchatel, on the construction and use of meteorological instruments, more particularly designed for distribution among our meteorological observers. This gentleman is now engaged, at the expense of the Regents of the University of the State of New York, in establishing a new system of meteorology, and in instructing the observers in the use of the instruments; for which service he is well adapted by his experience in a similar undertaking in Switzerland.

The report on the application of chemistry to agriculture is also nearly ready for the press. This is by Dr. Lewis C. Beck, of Rutgers College, New Jersey.

Collections.

Apparatus.—The plan of organization also contemplates the formation of a museum of physical instruments, which may be used for experimental illustration and original research, and may serve as models to workmen as well as to illustrate the general progress of inventions in this line.

The munificent donation of Dr. Hare has enabled us to commence this collection with very flattering prospects. It now contains, besides the articles of Dr. Hare, instruments for the illustration of the principles of light, heat, and sound, procured from Paris, and a full set of pneumatic instruments, of superior size and workmanship, constructed expressly for the institution by Mr. Chamberlain, of Boston; also, a number of chemical articles purchased during the last year; a set of magnetical instruments, already noticed; a standard barometer and thermometers, and other meteorological instruments, procured from Europe. It is proper that I mention, in this place, that we are indebted to Professor Snell, of Amherst, for superintending the construction of a set of ingenious instruments devised by himself for the illustration of wave motion. It is believed that the collection of instruments of research will, in due time, not only form a feature of great interest, but that it will surpass in extent similar collections in other countries.

It is intended to publish a descriptive catalogue of all the instruments, for the use of visiters, and it may be advisable to illustrate this by woodcuts, particularly as we have had presented to us all the wood engravings employed by Dr. Hare in describing his apparatus.

It is not in accordance with the plan of organization to confine the instruments of observation to the immediate use of the officers of the institution, but to suffer them to be employed, under certain restrictions, by others who are possessed of the requisite degree of skill. This practice may be attended in some cases with loss, and the breakage of instruments, but the expenditure which may be incurred on this account will probably be more than compensated by the advance to knowledge resulting from the adoption of the plan.

A small appropriation has been made for collections in natural history during the past year; and, under the direction of a distinguished young naturalist, upwards of ten thousand specimens of vertebrated animals, principally reptiles and fishes, have been obtained. Many of these are rare specimens from unexplored parts of our country, and a considerable number of them consists of undescribed species. They furnish the materials for an interesting series of memoirs on physiology, embryology, and comparative anatomy. The whole cost of making this collection did not exceed $140. We are convinced, from the important results obtained by this small expenditure, that a most valuable working collection of objects of the natural history of North America can be obtained at a very moderate outlay of funds.

Library.

During the past year the process of developing the plan of the library, as given in the programme, has been carried out by Professor Jewett as far as the funds which could be devoted to the purpose would allow.

Considerable progress has been made in the plan of forming a general catalogue of all the important libraries in the United States, and Professor Jewett has wisely commenced the preparation of a catalogue of all the books to be found in the different libraries in the city of Washington, including those of the several departments of the government, and in this way he will be enabled to exhibit the importance of catalogues of this kind.

He has also devoted much time to the continuation of his researches relative to the statistics of libraries in this country, and for an account in detail of his valuable labors in this line I must refer to his report herewith transmitted. I will also direct attention to some important suggestions in his report on the subject of the deposite of books for securing copyright, and the establishment of a bulletin.

Museum.

The formation of a museum of objects of nature and art requires much caution. With a given income to be appropriated to the purpose, a time must come when the cost of keeping the objects will just equal the amount of the appropriation; after this no further increase can take place. Also, the tendency of an institution of this kind, unless guarded against, will be to expend its funds on a heterogeneous collection of objects of mere curiosity; whereas the plan presented in the programme contemplates complete definite collections arranged for scientific purposes, rather than for popular display. For some suggestions on this point see page 21.

In this connexion there is one point which I beg to present to the consideration of the board as one of much importance, and which, if possible, should be decided at this meeting, because on it will depend the arrangement of that part of the building devoted to natural history. I allude to the acceptance of the museum of the exploring expedition.

By the law incorporating this institution, "all objects of art and of foreign and curious research, and all objects of natural history, plants, and geological and mineralogical specimens belonging to or hereafter to belong to the United States, which may be in the city of Washington, in whosesoever custody the same may be, shall be delivered to such persons as may be authorized by the Board of Regents to receive them."

This law evidently gives to the Smithsonian Institution the museum in the Patent Office, the conservatory of plants, and all specimens of nature and art to be found in the several offices and departments of the government. The act, however, cannot be construed as rendering it obligatory on the Regents to take charge of these articles, if, in their opinion, it is not for the best interests of the institution that they should do so. Though one of the reasons urged upon the Regents for the immediate erection of so large a building was the necessity of providing accommodation for this museum, I have been, from the first, of the opinion that it is inexpedient to accept it.

This museum was collected at the expense of the government, and should be preserved as a memento of the science and energy of our navy, and as a means of illustrating and verifying the magnificent volumes which comprise the history of that expedition. If the Regents accept this museum, it must be merged in the Smithsonian collections. It could not be the intention of Congress that an institution founded by the liberality of a foreigner, and to which he has affixed his own name, should be charged with the keeping of a separate museum, the property of the United States. Besides this, the extensive museum of the Patent Office would immediately fill the space allotted for collections of this kind in the Smithsonian edifice, and in a short time another appropriation would be required for the erection of another building. Moreover, all the objects of interest of this collection have been described and figured in the volumes of the expedition, and the small portion of our funds which can be devoted to a museum may be better employed in collecting new objects, such as have not yet been studied, than in preserving those from which the harvest of discovery has already been fully gathered.

The answer made to some of these objections has usually been, that the government would grant an annual appropriation for the support of the museum of the exploring expedition. But this would be equally objectionable, since it would annually bring the institution before Congress as a supplicant for government patronage, and ultimately subject it to political influence and control.

After an experience of three years, I am fully convinced that the true policy of the institution is to ask nothing from Congress except the safe-keeping of its funds; to mingle its operations as little as possible with those of the general government, and to adhere in all cases to its own distinct organization, while it co operates with other institutions in the way of promoting knowledge; and on the other hand, that it is desirable that Congress should place as few restrictions on the institution as possible, consistent with a judicious expenditure of the income, and that this be judged of by a proper estimate of the results produced.

Lectures.

At the last meeting of the board an appropriation of five hundred dollars was made to defray the expense of lectures to be given before the Smithsonian Institution, a part of which only is expended. The first course, in accordance with this part of the plan of organization, was by Professor Koeppen, of Denmark, on Modern Athens. These lectures were illustrated by a number of large drawings, for the use of which the institution is indebted to the Lowell Institute, of Boston. A second course was delivered by Dr. Hitchcock, President of Amherst College, on geology, in the lecture-room of the east wing of the Smithsonian building; and both courses were attended by large and apparently interested audiences. The results of these lectures indicate that much good may be effected in Washington by this means of communicating knowledge. No city, perhaps, of the same number of inhabitants, contains so many intelligent and well-educated persons desirous of obtaining information, and no point in our country is so favorably situated for the dissemination of opinions by means of lectures as the political centre of the American Union. Invitations have been given to a number of distinguished gentlemen in different parts of the United States to favor us with courses of lectures during the present session of Congress, and in almost every case the invitation has been accepted. It is intended to extend these invitations so as to call here in succession all who have distinguished themselves in literature or science. We shall not seek mere popular lecturers, whose chief recommendation is fluency of speech or powers of rhetorical declamation, but chiefly those who are entitled, from their standing and acquirements, to speak with authority on the subjects of their discourse, and whose character will tend to give due importance to their communications. It is to be regretted that the amount of funds which can be devoted to this object is not as great as could be wished. It is hoped, however, that many persons will consider the opportunity of visiting Washington, and the compliment paid by the invitation, as in part a remuneration for the labor and time which their lectures may cost. But in all cases sufficient should be allowed to defray all necessary expenses, and, as soon as the state of the funds will permit, to reward liberally, rather than otherwise, those who are called to assist the institution in this way. I forbear to publish the names of those who have consented to lecture, lest they should be accidentally prevented from filling their engagement, and the public thus be disappointed.

To facilitate the approach to the building at the time of these lectures the walks were temporarily improved, at a considerable expense to the institution. It is hoped that the authorities of the city of Washington will cause bridges to be erected across the canal, and walks to be constructed through the public grounds, to facilitate the approach to the building, and that the institution will not be expected to provide accommodations of this kind.

Building.

The east wing of the building was taken possession of by the Secretary in April last, and has since been constantly occupied. The west wing is now finished, and it is contemplated to occupy it temporarily as a library until the portion of the main building intended for this purpose is completed.

The plan of the Smithsonian building was designed by the architect, and recommended to the board by a committee of the Regents, before the programme of organization was adopted. It is not strange, therefore, when the building came to be occupied, that changes in the internal arrangement should be deemed advisable which would better adapt it to the wants of the institution. Such changes, at my suggestion, have been made; and for the propriety of these I am responsible. They are principally, however, those of simplification, and in themselves add nothing to the cost of the edifice. An increased expense, however, will arise out of the furnishing of new rooms which have been acquired by the alterations.

All of which is respectfully submitted.

JOSEPH HENRY,
Secretary of the Smithsonian Institution.

APPENDIX

TO

THE SECRETARY'S REPORT.

The following is a detailed account of the botanical explorations in New Mexico and California, referred to in the report:*

Mr. Lindheimer was sent to Texas, and an account of his collections was published in the Boston Journal of Natural History, vol. 5. They were made in 1843–'4, near Houston, and west of the Colorado, and have long since been distributed to subscribers.

His collections made further west, at New Braunfels, and in excursions in the dangerous regions westward, on the Llanos, &c., in 1845–'8, are now in course of study by Dr. Gray and Dr. Engleman. The sets will soon be distributed to the subscribers. It is desirable that the Smithsonian Institution should become a subscriber. The sets at furthest will comprise not more than five hundred species, which, at $8 per hundred specimens, will amount to $40.

Mr. Augustus Fendler was sent to Santa Fe in August, 1846, passed the winter there, and explored the country around until August, 1847, when he was obliged to return. (See memoir on his collections, published in the Memoirs of the American Academy, vol. 3, new series.) The fuller sets of these plants have all been disposed of. The largest on hand contains only two hundred and five species, which the Secretary has taken for the Smithsonian Institution at the usual price of $10 per hundred specimens.

Next, aided by advances from a citizen of Boston interested in encouraging these scientific investigations, who advances $200 a year for three years, Mr. Fendler was provided with the necessary outfit, and, with his brother as an assistant, was sent to explore the great interior valley between the Rocky mountains and California, to make his headquarters at the Mormon city on Utah lake, and explore the surrounding regions—especially the country south and southeast between that place and Santa Fe, which is entirely new ground, and bids fair to be of great interest. Meeting with an accident near Fort Kearny, on his way out, which destroyed much of his paper and other indispensable equipments, with a part of his mules, he has, as I learn from accounts received, been obliged to turn back to Independence, and is now refitting, in the hope still of reaching his ground this autumn, so as to begin his researches early next spring. If the Smithsonian Institution would subscribe to this enterprise the same as the private gentleman of Boston referred to, *or half that sum*, it would afford very important—indeed, I must now say, almost indispensable—assistance; and it would receive, in return, an equivalent share of the scientific proceeds of the expedition. Fendler is a collector of extraordinary aptitude and skill, and his specimens have been pronounced to be unsurpassed in perfection.

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* This information is from Dr. Gray, of Cambridge.

Mr. Charles Wright started last summer from San Antonio, Texas, to *El Paso del Norte,* in the southern part of New Mexico, accompanying the United States troops. He went on his own risk and that of Dr. Gray, aided by an advance of $125 made up by two gentlemen of Boston. It is desirable to keep him in New Mexico to explore the unvisited regions of it for another year at least, if not for two or three. A subscription of $150 per year for this and next year, at least, on the part of the Smithsonian Institution, would be a most important contribution to the advancement of American science, and would bring this enterprise to a successful issue. The collections made during the present season in a region never before visited by a naturalist are expected to come to hand, and to be distributed, in the course of the ensuing winter.

Communication from Professor Agassiz, relative to the formation of a Museum.

"As you do not contemplate forming a general museum in the Smithsonian Institution, but limit yourself to preserving the specimens referred to in the papers published in the Contributions, and to collecting materials upon some few special subjects, I would respectfully suggest that a special collection of living and tertiary shells of the United States, and another of embryos and young animals of all classes, be the subjects to which you direct the attention and care of the keeper of the natural history collections. These collections should be made with special reference to the solution of some most important questions now pending in the study of natural history.

"Let me first point out to you the objects of a special collection of living and tertiary shells. It is a problem to ascertain the mean annual temperature of the different geological periods anterior to the present condition of our globe. Various estimates have been made, but they do not rest upon sufficient data. Now the United States are most favorably situated for the solution of this question. There is a shore extending north and south over more than twenty-three degrees of latitude, along which shells are everywhere common, and present a succession of remarkable changes in their distribution and mode of association from the northernmost boundaries of that zone to its southern extremity, closely connected with the differences of climate under whose influences they live in different latitudes. A more minute investigation into the limits of this distribution, which has already been correctly ascertained by Dr. A. A. Gould for the northern States, would soon show such precise relations with the climate as to enable the observer to conclude from the shells the climate, (where he knows only the shells without indications upon their origin) and vice versa. What renders the United States particularly adapted for such investigations is the fact, that there is along the same shore a belt of tertiary deposites extending over as wide a zone as the present seashore. In these deposites shells abound; and, what is most remarkable, the older or lower beds contain a greater proportion of species similar to those which at present occur further south, whilst the uppermost layers contain such as are still to be found alive in the same vicinity. Large collections of these fossil shells, made from the different tertiary beds in different latitudes from Maine to Florida, judiciously kept apart, would no doubt in time afford as precise documents for ascertaining the mean annual temperature of these shores during the different periods of the tertiary times, as a series of thermometric observations. The person intrusted with the collection of these materials should of course know the difference between the successive beds of the tertiary deposites, and also the importance of never mixing fossils from different beds. Nothing would contribute more directly to advance the solution of this problem than to obtain from the superintendent of the United States coast survey some soundings and dredgings at different depths, as the shells which live about low-water mark are very different from those which occur successively at different depths, and such collections would contribute to establish the ratio of influence which climate has upon living beings. Species which are found near the shores at a given point occurring also at various depths further south, it is plain how important it would be to ascertain minutely their distribution in both directions horizontally and vertically. Such collections should be extended to the classes of corals and echinoderms, including in the latter the star fishes and sea urchins.

"The other collection to which I call your attention is a series of embryos and young animals. There is no museum at present in which there is anything like a collection of this kind, as it should be everywhere, since the importance of embryology has been fully appreciated. Taking care that such series be put up in the Smithsonian Institution, would at once give to the collections of that establishment the stamp of a true progressive scientific museum, even if it was confined to but few branches. Embryonic collections can be made with a two fold object: first, with a view of tracing the mode of formation and successive changes of organs, constituting anatomical and physiological embryology; second, with a view of comparing the changes of forms which young animals undergo with the permanent forms of others similar to them, constituting zoological embryology. To contribute to the progress of both these branches of embryology, distinct collections should be made and kept as distinct as our zoological and anatomical collections generally are. My idea is, that an anatomical museum of *preparations* from embryos and young animals of all classes should be made at the same time as a zoological museum of young in all ages and stages of growth, preserved whole. Having but recently called attention to the importance there is in comparing the different stages of growth of all animals in order to ascertain thei true relative position in a natural system, there is no possibility at present of appreciating the full value which such a collection will have for the future. Every day I feel the want of it, and hundreds of questions, which arise constantly since the idea has been started, cannot be settled, simply because there are no materials at hand anywhere for comparison. Devoting a portion of your resources to such collections would at once give you a start before all other museums, and the time may come, even within a few years, when that collection would be as much in advance of all other collections, as the museum of comparative anatomy in Paris was in advance of all similar establishments so long as Cuvier devoted his attention to it. The expenses would not be very great, as, in the beginning, series made from the most common animals would be quite sufficient. I can but repeat what I have said more than once, that the best chance for making rapid progress in this, as in every other branch of natural history, is to be largely supplied with the most common things. Hunting for varieties kills the spirit of deep investigation Series of skeletons, brains, hearts, intestines, sexual organs, skins, &c., &c., of the same common animals in all ages, for the different classes, would fully answer the purpose. Making such collections, for instance, for the class mammalia only from the cat or dog, the rabbit, the bat, the mole, the hog, the horse, the sheep, goat, or cow, the opossum, would be quite sufficient. For birds, from a hawk, a pigeon, a hen, a heron, a duck, a raven or crow, a fly-catcher, a sparrow, a woodpecker, a humming-bird, and a parrot, would be enough. For reptiles, from a turtle, a lizard, a snake, a salamander, and a frog. For fishes, from a shark, a skate, a lamprey eel, &c., &c. You see nothing rare, but complete series of anatomical preparations of young in different stages of growth, and also complete series of these young preserved whole for zoological comparison. An appeal should be made throughout the country to furnish materials. A stay of a few weeks in one of the great centres, where hundreds of thousands of pigs are killed, would afford invaluable materials to clear up the history of their growth, and to establish the true relations between living and fossil pachyderms—nay, perhaps give us the most correct outlines of those types which have become extinct, and the forms of which are perhaps only preserved in our days in some transient state of our living species. I entertain, indeed, no doubt about the practicability of drawing correct figures of the fossil paleotherium, anoplotherium, &c., from the embryos of our hogs and horses.

"There is a third point to which I would call your attention. It has struck me that the reason why comparative anatomy is so much neglected in this country, and scarcely at all studied by the young physicians, whilst in Germany it is made the foundation of all medical studies, is to be attributed to the fact that there is no text-book, no atlas of anatomical plates, made upon materials which can be obtained on this continent, and hence the impossibility for the beginner to make use of the works, even the best treatises, which we now possess. A chemical, philosophical, astronomical, mineralogical or geological text-book, and the necessary apparatus for studying the phenomena of inorganic nature, can be and have been imported, and found useful; as the laws which govern them are not only the same, but the materials themselves thus concerned are identical. Not so with animals and plants. Let a medical student in this country open Cuvier's wonderful papers upon the anatomy of molluscs, which have for nearly half a century been the models offered to our students for imitation, and he will not find one single identical species here for examination or comparison. All the investigations which have most directly contributed to the advancement of comparative anatomy and physiology within the last twenty years have been made upon animals which do not occur upon this continent, and I do not see how American students in general can be induced to take part in this movement unless they are provided with a set of illustrations resting upon native animals, easily obtained anywhere."

The thanks of the Board of Regents are due to the following gentlemen who have undertaken the labor and responsibility of examining memoirs which have been submitted to them. It is proper to observe that the commissioners have no means of verifying, by their own experience, the correctness of the statements presented to them for examination, and therefore they cannot be expected to vouch for more than the general character of the memoir.

John Torrey, M. D.,
Colonel J. J. Abert,
Lieut. M. F. Maury,
Lieut. Charles H. Davis,
Professor Stephen Alexander,
Professor Benjamin Peirce,
Professor W. C. Bond,
Major A. Mordecai,
Captain Frederick A. Smith,
Lieut. M. L. Smith,
L. Gale, M. D.,
C. D. Meigs, M. D.,
T. W. Harris, M. D.,
Professor E. Salisbury,
Professor Gibbs,
J. E. Holbrook, M. D.,
Professor Louis Agassiz,
Professor Charles Davies,
Professor Hackley,
Charles C. Page, M. D.,
Right Rev. Bishop Alonzo Potter,
Brantz Mayer, esq.,
Colonel J. D. Graham.
T. H. Lane, esq.

A list of observers from whom monthly meteorological returns have been received at the Smithsonian Institution during the year 1849.

MAINE.

Samuel H. Merrill, *Old Town.*
Milton Welch, *Houlton.*
George B. Barrows, *Fryeburg.*
James G. Garland, *Biddeford.*
Rufus Buck, *Bucksport.*
S. A. Eveleth, *Winaham.*
Joshua Bartlett, *Whitehead.*
J. D. Parker, *Steuben.*
Stephen Gilman, *Bangor.*
S. Eveleth, *Patten.*
George Prince, *Thomaston.*

NEW HAMPSHIRE.

William Prescott, *Concord.*
Robet C. Mack, *Londonderry.*
Rev. L. W. Leonard, *Dublin.*
Thomas B. Laighton, *Isle of Shoals.*
Doctor Charles Chase, U. S. Navy, *Portsmouth.*

VERMONT.

Rev. Zadock Thompson, *Burlington.*
Charles C. Frost, *Brattleboro.*
D. P. Thompson, *Montpelier.*
Professor W. H. Parker, *Middlebury.*
R. M. Manly, *Randolph.*

MASSACHUSETTS.

Jacob Bachelder, *Lynn.*
Charles J. Gillis, *Lowell.*
Samuel F. Haven, *Worcester.*
Benjamin Kent, *Roxbury.*
Gustavus A. Hyde, *Framingham.*
William Bacon, *Richmond.*
Professor E. S. Snell, *Amherst.*
James Ritchie, *Duxbury.*
Henry Rice, *Mendon.*
Abraham S. Peet, *Stockbridge.*
Amasa Holcomb, *Southwick.*
John G. Metcalf, *Mendon.*
Thomas Bailey, *New Bedford.*

RHODE ISLAND.

Professor A. Caswell, *Providence.*

CONNECTICUT.

Rev. T. Edwards, *New London.*
Prof. Aug. W. Smith, *Middletown.*
Professor E. Cutler, *New Haven.*
M. H. Cobb, *North Colebrook.*
Doctor Ovid Plumb, *Salisbury.*
Charles H. Hoadly, *Hartford.*

NEW YORK.

L. F. Munger, *Albion.*
Ezra Parmelee, *Morley.*
C. F. Maurice, *Sing Sing.*
E. A. Dayton, *Madrid.*
John Bowman, *Baldwinsville.*
Walter D. Yale, *Houseville.*
J. E. Breed, *Smithville.*
Ephraim N. Byram, *Sag Harbor.*
Prof. Chs. B. Warring, *Poughkeepsie.*
John Lefferts, *Lodi.*
James M. Tower, *Waterville.*
O. W. Morris, *New York city.*
Elisha Foote, *Seneca Falls.*
John P. Fairchild, *Seneca Falls.*
Dr. F. B. Hough, *Somerville.*
A. Hosmer, *Buffalo.*
Cornelius Chase, *Chatham.*
E. Giddings, *Lockport.*
John F. Jenkins, *North Salem.*
J. W. Earle, *Springville.*
C. Strong, *Oswego.*
U. S. Naval Station, *Sackett's Harbor*
U. S. Navy Yard, *New York.*
William E Guest, *Ogdensburg.*
Albert G. Carll, *Jericho, Long Island.*
Professor Wetherill, *Rochester.*
J. P. Chapman, *Clockville.*
Jas. H. Ball. *Alps, Rensselaer county.*
James B. Trevor, *Lockport, N. Y.*
L. A. Beardsley, *South Edmeston, Otsego county.*

NEW JERSEY.

Thomas B. Merrick, *Belleville.*
Jacob S. Gary, *Lambertsville.*
Professor Adolph Frost, *Burlington.*
R. L. Cooke, *Bloomfield.*
Dr. S. C. Thornton, *Moorestown.*
W. A. Whitehead, *Newark.*
John Clement, jr., *Haddonfield.*

PENNSYLVANIA.

Lorin Blodget, *Sugar Grove.*
A. R. McCoy, *Easton.*
Prof. J. R. Williams, *Canonsburg.*
Edward Fenderich, *Pittsburg.*
Prof. M. Jacobs, *Gettysburg.*
J. F. Coorlies, *Philadelphia.*
Dr. Paul Swift, *Philadelphia.*
William A. Stokes, *St. Mary's.*
Ebenezer Hance, *Morrisville.*
F. L. Stewart, *Canonsburg.*

Messrs. Edwards & Miller, *Lima.*
C. P. Jones, *Valley Forge.*
Freeman Lewis, *Union Town.*
Andrew Roulston, *Freeport.*
John Jackson, *Darby.*
John Wise, *Lancaster.*
David Peelor, *Indiana.*
Corydon Marks, *Manchester.*
Dr. H. Smyser, *Pittsburg.*
R. P. Stevens, *Ceres.*
Benjamin Grant, *Erie.*
Prof. S. F. Baird, *Carlisle.*
Dr. D. Alter, *Freeport.*
L. R. Huebener, *Bethlehem.*
Prof. L. D. Williams, *Meadville.*
Dr. Alfred Creigh, *Washington.*
F. A. Muhlenburg, jr., *Lancaster.*
Henry W. Thorp, *Wellsboro.*
U. S. Navy Yard, *Philadelphia.*
Lieut. Joseph Reed, U. S. N., *Phila.*
Dr. J. Heisceley, *Harrisburg.*

DELAWARE.

Prof. W. A. Norton, *Newark.*
John Burton, *Lewes.*

MARYLAND.

Josiah Jones, *Walkersville.*
A. P. Dalrymple, *Nottingham.*
T. C. Atkinson, *Cumberland.*
Isaac Bond, *Sandy Hill, Montgomery county.*
Henry W. Thorp, *Port Deposite.*
Professor William Baer, *Sykesville, Carroll county.*

VIRGINIA.

J. C. Wills, *Heathsville.*
N. F. D. Browne, *Leesburg.*
Professor Frs. J. Mettaner, *Prince Edward Court House.*
Benjamin Hallowell, *Alexandria.*
B. R. Wellford, *Fredericksburg.*
R. F. Astrop, *Diamond Grove.*
J. B. Imboden, *Staunton.*
U. S. Navy Yard, *Gosport.*
Charles J. Meriwether, *Charlottesville.*
David Turner, *Richmond.*

NORTH CAROLINA.

Rev. J. A. Shepherd, *Lake Scuppernong.*
Prof. James Phillips, *Chapel Hill.*
J. W. Calloway, *Rutherfordton.*

SOUTH CAROLINA.

Dr. John P. Barratt, *Barratsville.*
J. A. Young, *Camden.*
Joseph T. Zealy, *Orangeburg.*
Thomas A. Elliot, *Orangeburg.*
H. W. Ravenel, *St. John's, Berkeley county.*

GEORGIA.

J. M. Cotting, *Milledgeville.*
Prof. C. W. Lane, *Milledgeville.*
R. T. Gibson, *Whitemarsh Island.*
Charles Grant, *Darien.*

FLORIDA.

John Newton, *Uchee Anna.*
U. S. Navy Yard, *Pensacola.*
Dr. John E. Peck, *St. Augustine.*

ALABAMA.

S. J. Cumming, *Monroeville.*
Dr. S. B. North, *Mobile.*
Benjamin F. Holley, *Weokaville.*
Dr. Samuel K. Jennings, *Erie.*
Dr. Charles Frederick Percival, *Benton, Lownde's county.*

MISSISSIPPI.

George L. C. Davis, *Natchez.*
A. L. Hatch, *Vicksburg.*
David Moore, *McLeod's post office.*
Charles A. Folsom, *Gainesville.*
Thomas Oakley, *Jackson.*
James H. Vincent, *Granville.*
E. W. Beckwith, *Como, Panola county.*

TEXAS.

T. C. Ervendberg, *New Wied, Comal county.*
H. Yoakum, *Huntsville.*

LOUISIANA.

D. E. H. Barton, *New Orleans.*

ARKANSAS.

Philip L. Anthony, *Little Rock.*

TENNESSEE.

Dr. W. W. McNelly, *Fayetteville.*
Prof. James Hamilton, *Nashville.*
William Rothrock, *Nashville.*
B. F. Tavel, *Dover.*
U. S. Navy Yard, *Memphis.*

KENTUCKY.

J. E. Younglove, *Bowling Green.*
A. Beatty, *Prospect Hill.*
Mrs. L. Young, *Springdale, near Louisville.*

OHIO.

Professors Fairchild and Dascomb, *Oberlin.*
W. D. Watkins, *Norton.*
Professor W. W. Mather, *Athens.*
Dr. E. C. Bidwell, *Keene.*
Professor J. W. Andrews, *Marietta.*
Professor P. Carter, *Granville.*
Joseph C. Hatfield, *Lebanon.*
Prof. S. G. Irvine, *New Concord.*
Geo. L. Crookham, *Jackson Court House.*
Eugene Pardee, *Wooster.*
Michael Beecher, *Middlebury.*
John Lea, *Cincinnati.*
William Lapham, *Mount Tabor.*
Dr. S. N. Sanford, *Granville.*
F. A. Benton, *Keene, Coshocton county.*

MICHIGAN.

Charles Betts, *Burr Oak, St. Joseph's county.*
William A. Raymond, *Detroit.*
Franklin Everett, *Grand Rapids.*

Rev. George Duffield, *Detroit.*
Dr. W. M. Campbell, *Battle Creek.*
James G. Birney, *Lower Saginaw.*
Thomas Whelpley, *Brest.*
Dr. H. R. Schetterly, *Howell, Livingston county.*
Dr. H. Holliston, *Grand Rapids.*

INDIANA.

W. W. Austin, *Walnut Hills.*
Dr. John T. Plummer, *Richmond.*
B. M. Newkirk, *Laporte.*
Prof. Joseph Tingley, *New Castle.*
Prof. A. C. Huestis, *Fort Wayne.*
Prof. S. H. Thompson, *South Hanover.*
Dr. D. D. Owen, *New Harmony.*

ILLINOIS.

Rev. Geo. B. Giddings, *Quincy.*
S. Y. McMasters, *Alton.*
Dr. W. H. Joslyn, *Waukegan.*
Prof. William Coffin, *Jacksonville.*
Silas Meacham, *Monroe.*
Norton Johnson, *Alton.*
William Holt, *Rockford.*
Dr. S. B. Mead, *Augusta.*

IOWA.

T. S. Parvin, *Muscatine.*

WISCONSIN.

Dr. B. F. Mills, *Baraboo, Sauk county.*
James C. Brayton, *Aztalan.*
J. A. Lapham, *Milwaukie.*
Rev. John Gridley, *Southport.*
Prof. S. P. Lathrop, *Beloit.*
Orrin Dinsmore, *Emerald Grove.*

MINNESOTA.

Rev. Robert Hopkins, *Travers des Sioux.*
Joseph W. Holt, *Fond du-Lac.*

BRITISH POSSESSIONS.

Captain J. H. Lefroy, *Toronto, Canada West.*
Henry Poole, *Pictou, Nova Scotia.*
H. B. M. Military Station, *St. John's, New Foundland.*

INDIAN TERRITORIES.

P. P. Brown, *Doaksville, Choctaw Nation.*
T. B. Van Horne, *Tahlequah, Cherokee Nation.*

SECOND REPORT OF THE ASSISTANT SECRETARY OF THE SMITHSONIAN INSTITUTION, RELATIVE TO THE LIBRARY—PRESENTED JAN. 2, 1850.

To the Secretary of the Smithsonian Institution:

SIR: In anticipation of the annual meeting of the Board of Regents, I beg leave to present to you the following report of operations during the year 1849, in the department committed to my care.

A rapid growth of the library during this period was not expected. We had not at our disposal funds for the extensive purchase of books. But although we have been compelled to postpone the fulfilment of our design in one of its most essential features, the delay has been improved in making arrangements which will greatly facilitate our future progress, and in advancing, to a degree which would not otherwise have been possible, the plans detailed in my last report, for rendering our library a centre of bibliographical reference.

Statistics of the Library.

Previous to the present year, the books belonging to the institution were few, and were in the hands of the various officers, the Building Committee, and gentlemen engaged in preparing memoirs for our publications. They have been collected together, arranged, and prepared for use. For the first two or three months they were lodged in a room in the Patent Office, obligingly placed at our disposal by the Hon. E. Burke, then Commissioner of Patents. In March, the books were transferred to the second story of the eastern range of our own building, where they still remain. The spacious rooms of the western wing are now nearly ready for occupation. Temporary shelves have been erected for the accommodation of the books, and we propose soon to remove them thither.

The collection, though small, forms a respectable beginning.

The following table exhibits the number of books and other articles belonging to the library, including a few deposited by an individual for the use of the institution:

Books	4,233
Pamphlets	755
Engravings, in sheets or framed	1,383
Maps and charts, in sheets or mounted	42
Music, in sheets	106
Architectural drawings	30
Other articles, (five MSS., two medals, &c.)	29
Whole number of articles	6,578

These have been derived from the following sources:

	Books.	Pamphlets.	Engravings.	Maps.	Music.	Drawings.	Other articles.	Total
Purchases	2,316	25	1,335	......	......	......	5	3,681
Donations	157	695	47	22	......	30	2	953
Copyrights	887	35	1	20	106	......	22	1,071
Deposits	873	......	......	......	......	......	......	873
	4,233	755	1,383	42	106	30	29	6,578

The books purchased may be classified as follows:

Memoirs of learned societies, and literary and scientific journals - - - - - -	1,062	volumes.
Works on the fine arts, including those purchased by the Building Committee - - - -	431	"
Bibliographical works - - - -	699	"
Scientific works purchased for the use of authors -	124	"

The *purchases*, it will be seen, have been few, for the imperative reason already mentioned. They do not comprise all the books in either of the selections, which I had the honor to present last year; nor can we hope to buy them all with even another annual appropriation. It will be observed, too, that some books have been bought in other departments than those to which the selections mentioned were confined. For a large library, it is sometimes wise to depart from a plan of purchasing, which, on general principles, may have been adopted as the best. The exigencies and opportunities of the book-market may not only justify but demand such a departure. A collection of books which may have occupied in gathering it the best years of an active life, and the constant thoughts of a highly cultivated mind, may be offered to us at a low price. In buying it, we get not only the books, but the study and labor which were necessary for selecting and procuring them. Although, therefore, the collection be out of the line of our immediate plans, it should not, on that account alone, be refused. The temptations to swerve from an established system are, however, from this source, both numerous and strong; and good judgment is necessary to determine, in each case, the course to be pursued.

With reference to *donations*, those already received are believed to be no criterion by which to judge of our probable annual accessions from this source. It is not generally known that we are ready to receive such presents. No formal invitation for them has been issued. The history of all the libraries in this country is, however, singularly instructive upon this point. More than three-fourths of all the books in our public libraries are presents. Nearly the same thing may be said of some of the large libraries of Europe. Of 435,000 volumes in the British Museum, more than 230,000 were presented. Our situation in this respect is peculiarly promising. The seat of government of the United States must have an important and growing influence in literary affairs. There will always be among the officers of the government, the members of Congress, and the foreign diplomatic corps, men of high attainments in science and letters. Our institution will, we may hope, receive their warmest sympathy. During the sessions of Congress, there will be also a large concourse of visitors from our own and other lands, whose interest is strong in learning, and who will rejoice to find here the facilities for the gratification of their favorite tastes. There will thus, we may hope, grow up here, aside from political circles, a literary influence like that around many of the universities of Europe, and like that which has added so much lustre to the capital of Prussia. If we are true to our position, if we secure and retain the confidence of that part of the community most interested in our operations, we shall attract the donations and bequests of a wide and ever enlarging circle of the friends of science and good letters. The meagreness of our public libraries has led men of wealth and of study to collect for themselves, in special departments, private libraries quite complete within the range to which they are limited. The aggregation of these libraries, as they now exist, would make perhaps a better library for research than could be formed by the union of all our public collections. It is not improbable that some of these will eventually be intrusted by their proprietors to the permanent guardianship of our institution. A scholar of adequate means nowhere, excepting in his own writings, presents to the world so good a representation of his tastes, pursuits, and attainments, as in the collections which he makes of the writings of others. His library shows the friends whom he chose, the companions in whom he delighted. It shows the range of his sympathies and the extent and minuteness of his investigations. It is the exponent of his intellectual life. It is associated with his severest struggles, his best aspirations, his noblest triumphs. He shrinks from the thought of its being scattered when he can no longer use it, and he seeks a safe depository where it may remain—the most enduring monument that can be erected to his learning and his munificence.

It is upon this honorable principle in the scholar's character that our hopes are founded. Such a depository as he seeks we wish to form here. Purchases of books, even were our whole income devoted to them alone, would never place us on an equal footing with the scholars of Europe. We have, however, other reliance. If we make a beginning; if we provide room, safe custody, and the proper facilities for rendering such a collection in the highest degree subservient to its legitimate purposes, private liberality will come vigorously to our aid.

Another source to which we may look for considerable accessions to our library, and one from which we have, as yet, little to report, is *exchanges*. The publications of the several State governments are numerous, and we can, without doubt, procure most of them by exchange and donation. The various learned societies to which we have presented copies of our first volume of Contributions, in thanking us for the gift, have assured us of their intention to send us their own memoirs and transactions in return. These will be of great value as the sources of current information in science and literature, and will go far towards remunerating us for the expense of our own publications. Even from libraries which put forth no regular publications, we have been promised valuable returns.

I herewith present a list of all the books, maps, charts, musical compositions, &c., deposited in our library by authors and proprietors, for the security of the copyright, in compliance with the requirement of the 10th section of the act of Congress establishing the institution. The whole number of volumes and other articles received, from the 10th of August, 1846, to the 1st of January, 1849, is 1,071. Of these, 521 (viz: 389 books, 94 pieces of music, and 38 other articles) were received from January 1 to December 31, 1849. I have no means of ascertaining the exact number of copyrights secured in the United States during this period. The system of record and deposit in the clerks' offices and State Department is such as to render it difficult, if not impossible, to ascertain with accuracy the statistics of this subject. The librarian of the copyright rooms of the State Department informs me that the number of books annually deposited there is about 400. This cannot be more, I think, than one-half of the whole number for which copyrights are nominally secured each year in the United States.

For the first two years and a half from the date of our charter, but few publishers complied with the requirement of the act of Congress, so far as our institution was concerned. During the last year, however, the number has greatly increased; and now, we regularly receive the publications of most of the large publishing houses in the country. The mere cost of the books sent is not regarded by publishers; but the transmission of them is sometimes troublesome and expensive. If they could be forwarded without expense to the publishers, and if we could render the deposite more immediately advantageous, no doubt many more books would be sent to us.

To the public, the importance, immediate and prospective, of having a central depot, where all the products of the American press may be gathered, year by year, and preserved for reference, is very great. The interest with which those who in 1950 may consult this library would view a complete collection of all the works printed in America in 1850, can only be fully and rightly estimated by the historian and bibliographer, who has sought in vain for the productions of the past. These publications should be kept apart from the rest of the library, in chronological order. They should be so marked that they may be readily and surely identified. They should be restricted to the library room, except when required in case of dispute respecting titles; but they should be freely accessible to all who wish to consult them in the library. Thus, in coming years, the collection would form a documentary history of American letters, science and art. It is greatly to be desired, however, that the collection should be *complete, without a single omission.* We wish for every book, every pamphlet, every printed or engraved production, however apparently insignificant. Who can tell what may not be important in future centuries?

"It is in the fragments, now so rare and precious, of some alphabets, of some small grammars published for the use of schools about the middle of the 15th century, or in the letters distributed in Germany by the religious bodies commissioned to collect alms, that bibliographers now seek to discover the first processes employed by the inventors of xylography and typography. It is in a forgotten collection of indifferent plates, published at Venice by Fausto Verantio, towards the end of the sixteenth century, that an engineer, who interests himself in the history of the mechanical arts, might find the first diagram of iron suspension bridges."—[Libri.]

But neither the collection of copyrights at the State Department, nor that in the library of Congress, nor our own, is complete, or approaching completeness. Thus, the historical and bibliographical importance of each is greatly diminished.

To publishers it is necessary, for the security of their property, that a certified copy of each work should *somewhere* be preserved. The depositing of the copy in the office of the disctrict clerk for the State Department, has been by the Supreme Court of the United States declared to be essential to securing a valid copyright. Whether the same be true with reference to the copies required for our institution and the library of Congress, is a question of law which I am unable to answer. The interest of publishers, as well as of the public, seems to require additional and more explicit legislation on this subject.

In this connexion I beg leave to suggest the establishment of a *monthly bulletin,* in which the list of all works received during the preceding month, with the titles in full, the date of deposite, and the name of the proprietor, should be printed. Copies of this might be sent to every publisher who complies with the law. This journal might be widely and gratuitously distributed among the literary institutions of this country, and of Europe. The record would then be, as an advertisement, far more valuable to the proprietor than the book sent and the expense of transmission. Although I suggest the commencement of a bulletin in this particular connexion, I would not by any means confine it to the publication of the lists of copyright works. It might include a *scientific* as well as a *bibliographical* department.

In the bibliographical department might be published: 1st. Lists of publications deposited for the security of the copyright; 2d. Lists of accessions to the library and other collections, with the names of donors; 3d. Lists of new works published in Europe; 4th. The contents of the current numbers of the most important reviews and journals in this country and Europe, translating the titles of articles published in other languages than English; 5th. Items of intelligence and short essays of interest to book producers and readers.

This bulletin might at first be published at irregular intervals, as we find the materials, and it should be of such a general character as not to conflict with any established journal.

General catalogue of American libraries.

An important part of the plan for rendering our library immediately useful to American scholars is the proposed general catalogue of the books contained in all our public libraries. I am not aware that such a thing has ever before been attempted on so large a scale. The Navy Department of the French government published, a few years ago, a general catalogue of the books belonging to the various libraries (eleven in number) connected with that department. This useful work is contained in five large octavo volumes.

The French Department of the Interior, a few years ago, ordered a general catalogue to be made of all the manuscripts in the public libraries of France, and considerable progress has been made in the work.

But nothing like a general catalogue of all the libraries of a country has ever, to my knowledge, been undertaken. It has indeed been found next to impossible to make a catalogue of the largest library of each country. Much less possible would it be to make a general catalogue of all the libraries. The project, however, has lately been discussed in England, as appears from the report and minutes of evidence of the Select Committee of the House of Commons on public libraries. The discussion may have been suggested by the plan proposed by our institution. Be this as it may, it resulted in a strong recommendation, on the part of the committee, of great attention to a *system of catalogues*, and *a central collection of catalogues*—objects which would seem too obviously important to require formal announcement, and yet which have been much disregarded. There are few countries, indeed, where a general catalogue would be at all practicable. It is not an easy task even here; but it is not impossible. To its accomplishment, I have, during the past year, devoted considerable time.

The plan of the work I gave in my last report. On this plan, fifty-five thousand titles have been prepared from printed catalogues, and four thousand have been transcribed.

The titles must, of course, partake of the imperfections of the catalogues from which they are derived. These are neither few nor small. I say this not for the purpose of finding fault with their compilers: such censure would often be misplaced and unjust. The fault for inaccurate catalogues is frequently attributable less to the librarians who make them, than to their employers, whose impatience will not brook the delay necessary for the preparation of a valuable catalogue, or whose false notions of economy lead them to select incompetent librarians because they will work cheaply, or require competent ones to perform so many other duties, that they have not time to devote to the catalogue; or, finally, who cripple and trammel them by prescribing absurd and unsuitable systems. Were the original registries in all our library catalogues satisfactory, a better service could hardly be rendered to learning, in this country, than by completing and printing this general catalogue.

The work at present furnishes us with a catalogue, in one alphabet, of the several libraries in Washington, as well as in Cambridge. But we hope that it will be found practicable, through the agency of the Smithsonian Institution, to secure a general uniformity among the various libraries in the preparation of catalogues, and to establish a system of *stereotyping them by separate titles;* which will enable each library to print annual editions of its catalogue, incorporating the titles of the last accessions to the collection; and which will enable us, by means of the same titles, to print a general catalogue of all the libraries. The adjustment of all the details of such a system must, of course, be the work of time, and it may be found impracticable for us to commence the enterprise until we have a printing office of our own.

Statistics of American Libraries.

In my last report, I stated that I had sent to the various librarians in the country a circular letter containing queries intended to elicit important information respecting the public libraries. I had not then received a sufficient number of reports to warrant my presenting detailed statements. During the last year I have received a large number of returns, and have collected, from various other sources, information respecting most of the public libraries of the United States, which I have the honor herewith to present. I cannot suppose that this list contains all the public libraries in the country. I have reason to fear, on the contrary, that great numbers have been omitted, which are more important than some which have been noticed. I have sent out, however, more than 900 circulars, have written several hundred letters, and have endeavored to obtain full and accurate statistics. But, in the vast extent of our favored land there are almost innumerable collections of books, which are unknown beyond the sphere of their own usefulness. Of these it is impossible at once to gather perfect accounts. We may hope that the publication and circulation of the notes now collected will lead the officers of institutions, which we have unintentionally neglected, to give us knowledge of their existence and character. We hope to be useful to all of them in return, and to be in constant correspondence with them. Our own publications, and those intrusted to us for distribution, will be to them, as we have reason to suppose, acceptable and useful. We wish to ascertain the actual literary wealth of the country. This is necessary, to enable us to provide intelligently for its wants. My investigations have not been limited to the *public* libraries, though I have not felt at liberty to make detailed statements respecting private collections. These last, however, are of great value. In one sense they are *public* libraries. Almost without exception, access to them is freely allowed to all persons who wish to use them for research. The largest of all the private libraries in this country—that of our honored fellow-citizen, Col. Force—is the almost constant resort of the students of American history. The liberality of private collectors of books in this country is highly commendable. They are not "bibliomaniacs," nor "bibliotaphs," but men of sense and learning, who have been compelled, by the poverty of public collections, to supply for themselves the means of pursuing their investigations. They are not the men to be literary misers, or to give way to mean and unscholarly envy. Happy is it for the progress of our nation that such is the case.

These notices are not confined to the mere statement of the number of volumes and other articles in each library, but were intended to include a historical sketch of each, a general account of the kind of works of which it is composed, and a detailed account of many rare and valuable books and manuscripts; with the statement of the resources, the rate of increase, and the use made of the collection. For these details I must, of course, refer to the appendix. It may not, however, be out of place to insert here a summary of the number of libraries, with their size and general character.

The whole number of libraries, (including those of the district schools,) of which I have been able to collect accounts, is -	10,640
The aggregate number of volumes - - - -	3,641,765
The whole number, exclusive of district school libraries -	644
The aggregate number of volumes in these - - -	2,144,069
(These are exclusive of pamphlets, manuscripts, maps and charts, &c.)	
The number of libraries said to contain 50,000 volumes and upwards, is but four, namely: Harvard University, (including the public library, 56,000; Law, 13,000; Theological, 3,000; Medical, 1,200; students' libraries, 10,000 volumes,)	83,200
The Philadelphia and Loganian Libraries - - -	60,000
Congress Library - - - - - -	50,000
Boston Athenæum - - - - - -	50,000

The number of libraries containing over 20,000, (counting with the college libraries those of societies of students connected with the colleges, and *excluding* the four libraries above mentioned) - - - - - - -	11
The number of libraries containing from 10,000 to 20,000 volumes - - - - - -	38
The number of libraries containing from 5,000 to 10,000 -	75
The whole number of libraries containing over 5,000 volumes each - - - - - - - -	138
Whole number of libraries containing between 1,000 and 5,000 volumes - - - - - - -	437

These libraries may be classed as follows:

1. *State libraries*, including those of the general government and those of the State courts. Almost all the States in the Union have organized State libraries. Those which have not, possess collections of books which will ere long serve as the foundations of such Libraries. These libraries are composed, to a great extent, of public documents of the general and State governments, with works on statistics, political economy, history, &c. Some of them, as the Congress library, the New York State library, &c., take a much wider range, and are extremely valuable collections for general reference.

The whole number of these libraries is - - - 38
The aggregate number of volumes contained in them is - 283,037

2. *Social libraries*, including athenæums, lyceums, young men's associations, mechanics' institutions, mercantile libraries, &c.—These libraries are generally composed of popular works for reading rather than for reference. But among them are many of the best collections in the country. They generally contain only English books. I think, however, that any one, looking over the catalogues of these libraries, would be surprised and gratified to find them so well selected. History, biography, travels, fiction, and periodical literature, constitute the staple in most of them, though many are well supplied in almost every branch of knowledge.

I have reason to fear that the statistics which I have been able to collect are more incomplete with reference to this than to any other class. In some States, almost every town has, under some name, a social library. Most of these collections, it is true, are very small, containing less than a thousand volumes; but there doubtless are a great many, far more considerable in size, which I have unintentionally overlooked, but of which I hope hereafter to be able to give information.

The whole number of social libraries included in the notices is 98
Their aggregate number of volumes is - - - 562,229

3. *College libraries*, (exclusive of students' libraries.)—Our colleges are mostly eleemosynary institutions. Their libraries are frequently the chance aggregations of the gifts of charity; too many of them discarded, as well nigh worthless, from the shelves of the donors. This is not true of all our college libraries; for among them are a few of the choicest and most valuable collections in the country, selected with care and competent learning, purchased with economy, and guarded with prudence, though ever available to those who wish to use them aright.

The number of college libraries in the notices is - - 119
The aggregate number of volumes - - - - 580,901

4. *Students' libraries* in colleges, professional schools, academies, &c.—The societies formed by students in our seminaries of learning for mutual improvement in debate and composition, for the most part, possess libraries. These are generally valuable collections of books of a popular character. Sometimes (in Yale College particularly) they are large, well-selected, and admirably arranged and kept. Dust seldom gathers on the books in such collections.

The whole number of which I have obtained statistics is	134
The aggregate number of volumes	259,089

5. *Libraries of professional schools and incorporated academies.*

Whole number reported	222
Number of volumes	315,237

6. *Libraries of learned societies,* scientific, historical, &c.

Whole number	33
Number of volumes	143,576

7. *Public school libraries.*—The State of New York has 8,070 district school libraries, containing - - - - 1,338,848 vols.

The State of Massachusetts has, in some 1,500 libraries	91,539	"
The State of Michigan has, in 374 libraries	47,220	"
The State of Rhode Island has, in 35 libraries	19,637	"

(This State has a library in every town but three.)

Other States have commenced such collections, and it is to be hoped that they may be greatly multiplied. They are not intended for pupils alone, but for parents also. They are composed of valuable books, designed and adapted to communicate useful knowledge in a popular way, and to cultivate all the higher elements of character. These, with the public journals, are the true enlighteners of the people. It is impossible to over-estimate their influence. It would hardly be possible for books of an immoral and injurious tendency to find their way among such collections.

8. *Sunday school libraries.*—Of these it has not been in my power to collect reliable statistics. The number of books which they contain is very great. These books, though mostly for juvenile readers, are always of a moral or religious character, and they have vast influence in forming the intellectual as well as the moral character of the people.

The comparative statistics presented in my last report, though not so full as I desired, were sufficiently so to show the general condition of the country in comparison to that of other countries, with reference to the apparatus for extensive study, as well as to the means of a more superficial but a widely diffused general culture and enlightenment. That some books should be accessible to all who are disposed to read, is more important as a means of general education, than that vast collections should be offered to the learned few. Our own condition is that of the wide diffusion of facilities for general reading. We have a large number of libraries; they are widely scattered; they are freely open to the public; the conditions of their use are so easy that none are deprived of them who are disposed to use them aright. Of this we may be justly proud. It is strictly in accordance with the nature of our institutions that we should consult first for the education and mental improvement of the great body of the population. Our institutions are founded upon the intelligence of *the many;* not upon the power, or wealth, or learning of *the few*. The diffusion of knowledge is our safeguard. The common school, the village library, the cheap free press, are the supports, the guarantees, the champions of liberty. We shall never be found pleading for anything that interferes with these or abridges their usefulness. It is rather in their interest that we ask for the means of the highest literary acquisitions. The stream cannot rise higher than the fountain; if the source be not well supplied, the river fails. Teachers must have the facilities for learning; and as the standard of education is raised, higher attainments are demanded from teachers—attainments which cannot at present be made in this country by the aid of our public institutions. I use the word "teachers" in its widest acceptation, including all who attempt to instruct the public. It is in the appliances for thorough study, for original research, for independent investigation, that we are deficient. If a studious and reflecting American desires to review the history of the world, or some portion of it, from his American position, unless he be able to expend thousands of dollars in the purchase of books, he must abandon his design, for he cannot procure them from our public collections.

There has recently appeared from the American press, written by an American scholar, one of the most comprehensive, profound, and elegant works which has ever been published in the department of literary history. We receive it with patriotic pride. But this work could be written, in this country, only by one who was able to procure for himself the necessary literary apparatus. The library of the author contains some 13,000 volumes, and in the department of Spanish literature is one of the richest in the world. Our object is to provide that *every man* in America, though he be poor, whose mind kindles with a great theme, may be able to pursue it and enrich our national literature with the results of original investigations. It is sometimes said, in reply, that if any one desires books not already to be found, he may order them from Europe, and receive them in six weeks or two months. But the scholar may be, and generally is, poor. If not, he cannot, from the outset, foresee the extent of the field over which he must range, the side-paths which he must trace out in order to settle the true route; he will thus be subjected to great delay in ascertaining and collecting his materials. But the ordering of books is a very different matter from what is generally supposed. If the book be a new one, still in the market, it may be received within a few weeks; but if, as is the case with two-thirds, or perhaps nine-tenths of the books which may be needed, it be an old work, and only to be found at long intervals and by diligent search, the case is very different. His order will be answered only by the phrase, "out of print." He may order again, and receive for reply, "cannot be obtained." This will be his experience till he devotes years to gathering his materials, or till, discouraged by his ill success, he abandons his design and sinks down to be a mere copyist and compiler; to take his opinions at second-hand, from perhaps superficial and prejudiced writers—the only ones to whom he can gain access. We are thus, as a nation, condemned to literary dependence, if not imbecility.

The government, and the educated men of every State in Europe, have felt the importance of having at least one library in each country, where the materials for thorough scholarship should be garnered, and opened to the studious; yet no nation in Europe is in a situation so much demanding such a collection as ourselves. If Roscoe could not obtain, as has been stated, in England, the books which he wanted for writing the history of Leo X, it was comparatively easy for him to cross the channel and consult larger collections on the continent; but for our authors a voyage of several thousand miles, and the expense of a residence abroad, are almost insurmountable barriers to literary exertion.

To lay the foundations of a large library is not a short nor an easy task. Few persons, even among learned men, estimate its difficulties aright. Much time and labor must be expended with but small immediate results. Patience and toil must be exercised by those intrusted with the task, and tolerated, if not appreciated, by the public. The history of similar institutions must be studied in order to avoid their mistakes, and profit by their successful experience. Lists of books must be made by a diligent study of the literature of every department of knowledge, and a wide consultation with men profoundly acquainted with each. Plans must be formed, not merely for the moment, and to meet temporary exigencies; but such as are capable of indefinite extension; such as will not require to be remodelled even when the library is expanded to its greatest magnitude.

How much expense, delay, mortification, and complaint might have been spared, had the directors of the large libraries of Europe, from the outset, foreseen and provided for the great enlargement of these establishments.

The large public library is, in truth, a modern, a *new* institution. It is only within the last half century that the uses of such libraries have been fully understood and appreciated, and the method of forming and conducting them studied upon true principles, and with satisfactory results. The public libraries of the ancients, and those of later times, down nearly to the present century, were, as aids to learning, or means of popular progress in knowledge, not to be compared with those of our own day.

Books, as Voltaire has well said, rule the whole civilized world. But so rapid has been of late years the multiplication of them, that few scholars indeed can procure, by their own private resources, all that they need for their investigations. Yet, with the multiplication of books has increased the number which it is necessary for every one to consult who would not be behind the age in his learning. Hence public libraries have become an indispensable requisite to the attainment of liberal scholarship. The books in a public library cannot, however, be so well known to any particular student as those of his own shelves, nor can they be equally accessible to him; for he is not the only one who has a right to them, nor is it his convenience alone that is to be consulted. Hence arises the importance of so arranging, cataloguing, and keeping the library, as to facilitate the researches of each, without prejudice to the claim of any, or to the transmission of the privilege unimpaired to others. That the meeting of all these demands is no light matter, may be inferred from the fact that it has been made the serious study of some of the ablest minds in Europe; that its principles have been in Germany so thoroughly discussed and reduced to system, as, within the last twenty years, to have claimed admission into the family of the sciences.

It was in view of considerations like these, that the plans of the Smithsonian Library were made to embrace the early accumulation of works for bibliographical reference on all branches of learning; the collection of information respecting existing libraries of this and of other countries;

the opening of a correspondence with these libraries for the interchange of opinions, and for mutual aid and encouragement, as well as the novel and important project of forming a central catalogue of all the different works to be found in the public, and, as far as practicable, the private libraries of the country.

Nothing of course can fully compensate for the want of books; but while we are gathering them slowly, and waiting for the means of more rapid accumulation, these plans will, it is believed, promote the immediate usefulness of our institution, and prepare the way for the ampler realization of our hopes with respect to it in the future.

Respectfully submitted.

C. C. JEWETT.

JANUARY 1, 1850.

PROCEEDINGS OF THE BOARD OF REGENTS OF THE SMITHSONIAN INSTITUTION, AT THEIR FOURTH ANNUAL SESSION, COMMENCING WEDNESDAY, JANUARY 2, 1850.

Adjourned meeting of the third annual session of the Board of Regents, for the purpose of electing a Chancellor.

March 7, 1849.

The board met at 10 o'clock a. m., in the Vice President's room, in the Capitol, agreeably to adjournment.

Mr. Seaton was called to the chair.

Present: Messrs. Bache, Davis, Fillmore, Hilliard, Mason, Seaton, and Totten.

The chairman stated the object of the meeting to be to elect a Chancellor in the place of Mr. Dallas, whose term of office as Regent had expired. On the ballot being counted, it appeared that Mr. Fillmore was unanimously elected.

On motion of Mr. Seaton, it was unanimously

Resolved, That the Chancellor and Secretary be requested to communicate to the Hon. George M. Dallas the high appreciation entertained by the board of his services as a Regent—particularly during the period of the organization of the institution—their thanks for the manner in which he has discharged the duties of presiding officer of the institution, and their respect for his character as a gentleman and a scholar.

On motion of Mr. Mason, it was unanimously

Resolved, That the Secretary inform the President of the Senate that a vacancy exists in the Board of Regents by the expiration of the term of Mr. Pearce, of the Senate.

The board then adjourned *sine die*.

FOURTH ANNUAL MEETING OF THE BOARD.

Wednesday, January 2, 1850.

This being the day appointed for the annual meeting of the Regents, the board met at half past twelve o'clock, in the eastern range of the Smithsonian building.

Present: Messrs. Davis, Fillmore, Mason, Rush, Seaton, and Totten.

Mr. Fillmore, Chancellor of the institution, took the chair.

The proceedings of the last meeting, held March 7, 1849, were read and approved.

Professor Henry, the Secretary, stated to the board that since the last meeting, the Hon. Mr. Pearce, of Maryland, had been appointed a Regent from the Senate of the United States, and that there were now three vacancies in the board to be filled from the House of Representatives. The Secretary also stated that his report on the operations of the institution was ready to be laid before the board, but as the new members would probably be appointed in a few days, he would suggest that the reading of it be deferred until the next meeting.

Mr. Seaton, chairman of the Executive Committee, stated that this meeting occurred too soon after the close of the fiscal year to permit the accounts to be made up, and requested that his report be postponed until the next meeting.

General Totten, chairman of the Building Committee, made a similar request.

No objection being made, the presentation of these reports was deferred until the next meeting.

In answer to a question from the Chair, the Secretary stated, in general terms, what business would occupy the attention of the board at this session.

On motion of Mr. Seaton,

The board adjourned, to meet on Friday, 11th inst., at 11 o'clock a. m.

JANUARY 11, 1850.

The Board of Regents met this day, agreeably to adjournment, in the Smithsonian building.

The meeting was called to order by Mr. Seaton. The Chancellor being absent, on motion of Mr. Seaton, Mr. Pearce was called to the chair.

The Secretary announced to the board that the Hon. Mr. Hilliard, of Alabama, Hon. Mr. Colcock, of Georgia, and Hon. Mr. Fitch, of Indiana, had been appointed Regents from the House of Representatives. These gentlemen appeared and took their seats at the board.

The members then present were Messrs. Colcock, Davis, Fillmore, Fitch, Hilliard, Mason, Pearce, Rush, Seaton, and Totten.

The proceedings of the last meeting were read and approved.

The report of the Secretary of the institution was presented and read.

On motion of Mr. Seaton, it was

Resolved, That the report of the Secretary be recorded, and form a part of the report of the Regents to Congress.

Mr. Seaton, on behalf of the Executive Committee, presented a report on the financial condition of the institution, and stated that the report was complete thus far, and that the portion relating to appropriations for the ensuing year would be presented at another time.

Gen. Totten presented the report of the Building Committee.

On motion of Mr. Pearce, it was ordered that these reports also be recorded.

The Secretary suggested that the journal of the meeting of the *establishment* be read. It was accordingly read.

On motion of Mr. Seaton, it was

Resolved, That the honorary members of the Smithsonian Institution be, and are hereby, invited to attend the meetings of the Board of Regents whenever they may think fit; and that the Secretary communicate to the present honorary members, and from time to time to such persons as may be elected honorary members, this resolution and invitation of the Board of Regents.

Mr. Davis presented, by request, a proposition of Mr. Harmon, of Ohio, for the encouragement of architecture.

This proposition was, on motion of Mr. Davis, referred to the Secretary and Executive Committee.

Mr. Rush presented a letter from Harrison Hall relative to the purchase of books; which was laid on the table.

The Secretary stated that he had received a note from the Hon. Abbott Lawrence, United States ambassador to Great Britain, concerning a communication from H. P. Bohn, offering for sale, at the price of thirty guineas, a small portrait of James Smithson, now in the possession of Mrs. Fitall, widow of a servant of the late Mr. Smithson.

This communication having been read,

On motion of Mr. Mason, it was

Resolved, That the Secretary be authorized to purchase the portrait of the late Mr. Smithson, spoken of by Mr. Lawrence in his letter of 10th of December, 1849.

On motion of Mr. Davis, the board adjourned, to meet on Saturday, the 18th instant, at 11 o'clock a. m.

SATURDAY, JANUARY 18, 1850.

Several of the Regents met this day, agreeably to adjournment. A quorum not being present, the meeting adjourned to the 22d instant.

TUESDAY, JANUARY 22, 1850.

The Board of Regents met, agreeably to adjournment, at half past 6 o'clock p. m., in the Smithsonian building.

Present: Messrs. Fillmore, Colcock, Davis, Fitch, Hilliard, and Pearce.

The Chancellor called the meeting to order, and the proceedings of the last meeting were read and approved.

The first business in order being Professor Jewett's report on the Library, the same was presented by the Secretary, and ordered to be read: it was accordingly read, and ordered to be printed.

A letter was presented by the Secretary, from Rev. N. Paddock, requesting the co-operation of the Smithsonian Institution with an Educational Institution proposed to be established in the city of Washington—together with the proposed answer of the Secretary: in which answer the board concurred.

A list of Chinese books for sale, and an accompanying letter from the Hon. Caleb Cushing, were laid before the board, read, and referred to the Secretary.

The proposition of Mr. Harmon, of Ohio, relative to architecture, was called up: no action, however, was taken upon it, and the board adjourned, to meet on Saturday, 26th instant, at 10 o'clock a. m.

SATURDAY, JANUARY 26, 1850.

The Board of Regents met this day at 11 o'clock, agreeably to adjournment.

Present: Messrs. Fillmore, Davis, Hilliard, Mason, and Pearce.

The Chancellor took the chair, and the proceedings of the last meeting were read.

The Secretary called the attention of the board to the astronomical ex pedition of Lt. Gilliss, and a letter was read from him, dated at his station near St. Jago, Chili. The information thus placed before the board concerning the object and progress of the expedition, made apparent the importance of furnishing Lieut. Gilliss with improved instruments.

Whereupon, on motion of Mr. Mason, it was

Resolved, That the Secretary be directed to furnish Lieut. Gilliss with instruments for facilitating his physical and astronomical observations in Chili, at an expense not exceeding one thousand dollars.

The consideration of Mr. Harmon's plan for the encouragement of architecture was then resumed and discussed; when, on motion of Mr. Hilliard, it was

Resolved, That the Secretary be instructed to report on the scheme submitted by Mr. Harmon for the improvement of architecture, exhibiting such features of the scheme as may be found to be within the plan of organization adopted for the operations of the Smithsonian Institution.

The Secretary presented to the board a list of the names of gentlemen who had undertaken the labor and responsibility of examining memoirs and propositions submitted to the institution

Whereupon, on motion of Mr. Davis, it was

Resolved, That the Secretary be requested to address a letter to each of the gentlemen named, and convey to them the thanks of the Board of Regents for their assistance in carrying on the operations of the institution.

Mr. Davis presented a communication from Charles B. Wells, esq., relative to a series of archæological researches made by himself in Peru, and requesting the assistance of the institution in their publication, which was referred to the Secretary.

A letter was presented from Daniel Peirce, detailing a method of educating the Indian tribes, which was also referred to the Secretary.

The Secretary called the attention of the board to the engagement existing between the institution and Hiram Powers, relative to the purchase of his statue of the Greek Slave, which subject was referred to the Secretary, with the understanding that he would communicate with Mr. Powers, or his agent, for the purpose of effecting an alteration in the terms of the contract.

The Secretary made a verbal report, on the progress made by Henry Stevens in the compilation of the "Bibliographia Americana."

He also presented a letter from Pierre Margry, of Paris, requesting the assistance of the institution to enable him to publish his researches upon the history of the ancient French colonies in North America; which letter was referred to the Secretary, for a reply, in accordance with the rules adopted by the board.

On motion of Mr. Davis, it was

Resolved, That the board adjourn, to meet on Saturday next at 10 o'clock a. m.

Whereupon the board adjourned.

FEBRUARY 2, 1850.

The following gentlemen attended, agreeably to adjournment, viz: Messrs. Davis, Fitch, Seaton.

No quorum being present, the meeting adjourned to the 9th inst., at 10 o'clock a. m.

FEBRUARY 9, 1850.

The Board of Regents met, agreeably to adjournment, at 11 o'clock a. m.

Present: Messrs. Fillmore, Colcock, Davis, Fitch, Hilliard, Pearce, and Seaton.

The Chancellor took the chair, and the proceedings of the last meeting were read.

A verbal report on the proposition of Mr. Harmon, of Ohio, for the improvement of architecture in the United States, was made by the Secretary, accompanied by a synopsis of the plan. He stated that he considered no part of Mr. Harmon's plan to be absolutely at variance with the programme of organization, but he was not clear with regard to its practical application, and the propriety of its adoption. It might, however, be submitted to the public through the Regents' report to Congress.

The following is a synopsis of the plan referred to:

PART FIRST.

1. Invite architects to send to the institution designs for building.
2. Refer these to a commission, comprising at least one practical architect.
3. The examiners to select from the number submitted, those of a certain degree of merit, to be honored with a place in the gallery.
4. The accepted designs to be re-executed, in a uniform and attractive style of art, before being placed in the gallery, and undersigned by the name of the architect.

PART SECOND.

1. Invite building committees, or others charged with the erection of public buildings, to send to the Smithsonian Institution, specifications, limit of cost, and amount of premium offered.
2. The Secretary to advertise, in the usual form, for designs, and to refer them to a commission of competent judges, one of whom to be a practical architect.
3. From among the designs submitted, the commissioners to select a few of the best and return them to the Building Committee, stating their preference, if any.
4. The plans of extraordinary merit, selected from among the designs submitted, shall be entitled to a place in the prize gallery.
5. The expense of the commission for making the estimate, and advertising, shall be paid from a percentage on premiums accompanying the specifications.
6. A person well skilled in practical building to be employed, and the designs adopted, to be submitted to him for a correct estimate of the cost.

This synopsis being considered, the first article of the first part was adopted, after being amended by Mr. Davis, to read as follows:

Resolved, That architects be invited to send in designs for buildings, and that notice be given that models of ancient or modern architecture will be received by the Smithsonian Institution, and that such designs or models, at the discretion of the Regents, will be placed in the gallery of art.

The second and third articles were struck out; and, on motion of Mr. Fitch, it was

Resolved, That the fourth article be referred to a committee consisting of the Secretary and Mr. Seaton, with instructions to ascertain from Mr.

Harmon what is his plan of re-executing the architectural drawings, and the probable cost; and that the remainder of the synopsis be laid upon the table.

The Secretary laid before the board the resignation of General J. G. Totten as a member of the Building Committee, which was accepted.

The board proceeded to fill the vacancy, and Mr. Davis was elected.

A map of the public grounds west of the Capitol was laid before the Regents, and their attention called to the recommendation of a general plan for improving the mall.

The Secretary directed the attention of the board to a part of the building contract which required elucidation, and requested that they would express their opinion as to the sum to be paid annually to the contractor; whereupon the following preamble and resolution, offered by Mr. Fillmore, (Mr. Pearce being in the chair,) were adopted:

The Board of Regents having examined the building contract, for the purpose of determining its true construction:

Resolved, That, in the opinion of this board, the contractor is only entitled, in each year, to forty-one thousand dollars for work done during that year, deducting therefrom 15 per cent., which is to be paid him at the end of the five years, with 6 per cent. interest.

The Secretary presented a report from Professor C. C. Jewett, on the subject of *copyright*, which was referred to a committee consisting of Messrs. Davis, Mason, and Pearce.

The board then adjourned to the 23d instant, at 10 o'clock a. m.

FEBRUARY 23, 1850.

The Board of Regents met this day.

Present: Messrs. Fillmore, Bache, Fitch, and Seaton.

A quorum not being present, it was agreed to adjourn to Saturday, March 2, 1850.

MARCH 2, 1850.

The Board of Regents met this morning at 10 o'clock, in the Smithsonian building.

Present: Messrs. Bache, Colcock, Davis, Fitch, Hilliard, Mason, Pearce. and Seaton.

In the absence of the Chancellor, Mr. Seaton was called to the chair.

The proceedings of the last meeting being read, the committee on Mr. Harmon's plans of architectural drawings made a report, which was read and adopted.

Mr. Davis moved that the further consideration of the fourth article of Mr. Harmon's synopsis be indefinitely postponed, which was carried.

Mr. Davis then offered the following resolution, which was adopted:

Resolved, That, although the board do not deem it expedient to adopt Mr. Harmon's plan of executing architectural drawings; yet, for the purpose of placing in the institution a specimen of a peculiar art of drawing architectural designs, the Executive Committee be authorized to engage Mr. Harmon to execute the elevation of the Smithsonian Institution in his peculiar style, with a view to placing it in the institution, if the Regents shall, upon examination, approve of so disposing of it.

The Secretary brought before the board the subject of an accident which had happened since the last meeting, in the unfinished part of the building. He stated that, at about 6 o'clock p. m., on Tuesday, the 26th ult., a portion of the interior framing and floors of part of the main building, intended to contain the museum of apparatus, fell down into the basement. He had himself just before left the ground; but as soon as he heard of the occurrence he returned to the building, and after ascertaining the character of the accident, he addressed a letter to the architect, in New York, requiring his immediate attendance. He next gave directions that the part of the building containing the fallen timbers should be closed, and that everything should remain in the same condition until the arrival of the architect. Mr. Renwick reached Washington on Thursday morning, February 28. Immediately afterwards, a meeting of the Building Committee was called, at which the state of the work was examined, and a request made that the architect, superintendent, and contractor should each furnish a report on the cause of the accident.

These reports were presented to the board, and the following resolution, offered by Mr. Fitch, was adopted:

Resolved, That the Building Committee be requested to take under consideration the reports of the architect, superintendent, and contractor, on the subject of the late accident; that they associate with them Professor Bache, General Totten, the Secretary of the institution, and some competent and entirely impartial architect or architects; that they make a survey of the whole building, report the manner, faithfulness, and security in which the building contract has hitherto been executed, and upon the plan most proper in their estimation to repair the damages and finish that portion of the building in which the accident happened, and other unfinished portions thereof.

The board then adjourned, to meet again at the call of the Secretary.

April 20, 1850.

The Board of Regents held a meeting this day, at the call of the Secretary, at 10 o'clock a. m., in the Vice President's room at the Capitol.

Present: Messrs. Bache, Davis, Fillmore, Fitch, Mason, and Seaton.

The Chancellor being in the chair, the proceedings of the last meeting were read.

The Secretary made a communication from Mr. Harmon, in which he requested to substitute a view of another building for that of the Smithsonian Institution in making the drawing, in his style, for the gallery of art.

On motion of Mr. Davis, the subject was laid on the table.

The committee, on the part of the Regents, charged with the examination of the building, consisting of the Building Committee, together with Messrs. Bache, Totten, and the Secretary, made a report, including the report of the commission of architects appointed to examine the building; also the remarks of James Renwick, jr., architect, upon the same.

On motion of Mr. Fitch,

Resolved, That the report of the committee on the building, and the accompanying documents, be recommitted for such further action as may be deemed necessary. Also,

Resolved, That the Building Committee be directed to take legal advice as to the power possessed by the Regents, under the contract, and the course to be pursued should it be found necessary to declare it void; and that notice thereof be given to the contractor.

On motion of Mr. Bache,

Resolved, That the thanks of the Board of Regents be transmitted to Hon. E. G. Squier, esq., United States chargé d'affaires at Guatemela, for the gift of aboriginal relics recently made by him to the Smithsonian Institution.

On motion, the board adjourned, to meet at the call of the Secretary.

June 1, 1850.

The Board of Regents met this day, at the call of the Secretary, at 11 clock a. m., in the Smithsonian building.

Present: Messrs. Fillmore, Fitch, Hilliard, Pearce, Seaton, and Totten.

The Chancellor took the chair, and the proceedings of the last meeting were read.

The Secretary laid before the board a proposition from Francis Markoe, esq., relative to the deposite in the Smithsonian building of his cabinet of minerals, with a view to their future purchase.

Whereupon, on motion of Mr. Colcock, it was

Resolved, That the board decline the proposition of accepting the deposite with the view to a future purchase.

The Secretary stated that the portrait of Smithson, which was ordered to be purchased at a previous meeting, had been received from England; and also, that five volumes of an Encyclopedia, formerly the property of James Smithson, had been purchased through the Hon. Abbott Lawrence.

On motion of Mr. Davis, it was

Resolved, That the thanks of the board be returned to the Hon. Abbott Lawrence, for the attention he has given to the interests of the institution abroad.

On motion of Mr. Seaton, it was

Resolved, That the Secretary and chairman of the Executive Committee be appointed a committee, whose duty it shall be to report a system of keeping and disbursing the funds of the institution.

The Secretary next brought before the board a proposition to ask Congress to receive from the institute $150,000, to be funded as an irredeemable 6 per cent. stock, to be added to the principal of the Smithsonian bequest.

The following resolutions in reference to this, offered by Mr. Seaton, were adopted:

Resolved, That the Chancellor and Secretary be authorized to sell $200,000 of stock of accrued interest, or any part thereof, not less than $150,000, the proceeds to be deposited to the credit of the Chancellor and Secretary, subject to be drawn at any time, with Corcoran & Riggs, at not less than 4 per cent., provided they shall give security therefor, in United States stock.

Resolved, That whatever the premium on the above stock, when sold, shall amount to, it be deposited, subject to be drawn for the current expenses of the institution, on requisition in the usual form.

Resolved, That it is expedient to enlarge the permanent fund of this institution, by the investment of such sums, not exceeding $200,000, as may have been or shall be received for accrued interests, or otherwise, in addition to the principal sum of the Smithsonian bequest, augmenting the principal sum to that amount; and that application be made to Congress to receive such sums, not exceeding $200,000, as may have been or shall be received for accrued interest, or otherwise, into the United States treasury, upon the same terms on which the original bequest has been received.

On motion of Mr. Pearce,

Resolved, That the Secretary be requested to communicate a copy of this resolution to Congress, and to request that provision be made by law, in accordance therewith.

The Secretary next brought forward the subject of the contract for the building. The letter of J. M. Carlisle, esq., the counsel employed to give an opinion of it, was read.

On motion of General Totten, it was

Resolved, That the committee on the building be authorized to negotiate a compromise with the contractor relative to the defective work and materials in the Smithsonian building, and also with regard to a modification of the contract, subject to the approval of the Board of Regents at their next meeting.

The Secretary laid before the board a volume of magnetical and meteorological observations, made at Toronto, Canada, and presented to the institution by the British government. The board being informed that the duration of the Toronto Observatory is limited by law, on motion of Mr. Seaton, it was

Resolved, That the Chancellor and Secretary be requested to acknowledge the receipt of the volume, with the expression of the hope of this board that Her Majesty's government may find it expedient to continue an institution of such utility to science.

On motion, the board adjourned, to meet at the call of the Secretary.

July 3, 1850.

The board met this day, at the call of the Secretary, in the Smithsonian building, at 9 a. m.

Present: Messrs. Fillmore, Colcock, Davis, Fitch, Hilliard, Mason, and Pearce.

The Chancellor took the chair.

Mr. Lenox, elected mayor of Washington, and ex-officio Regent of the Smithsonian Institution, appeared and took his seat.

The journal of proceedings of the last meeting was read and approved.

The Secretary presented the final report of the committee charged with the examination of the building, which was read as follows:

Final report of the Committee of the Regents charged with the examination of the building.

Under the resolutions of March 2 and of April 20, 1850, offered by Mr. Fitch, and also the resolution of June 1, 1850, offered by General Totten, the committee charged with examinations relative to the building submit the following report:

In accordance with the first resolution of Mr. Fitch, the committee associated with themselves three disinterested architects, viz: Col. William Turnbull, of the United States topographical engineers: Edward B. White, esq., of Charleston, South Carolina; and John R. Niernsee, esq., of Baltimore, Maryland. These gentlemen were highly recommended as practical architects and engineers, of established reputation, and the committee have full confidence in their experience, judgment and integrity.

The committee are indebted to the Hon. Alexander Evans, of Maryland, for an examination of the building, with reference to a comparison of the different reports; and to Mr. Joel Downer, for an additional inspection and opinion as to the character of the timber and wood-work. In accordance with the second resolution of Mr. Fitch, they have also taken legal advice as to several points of the contract.

After a careful study of the reports of the contractor, superintendent, Mr. Renwick, the commission of architects, and of Mr. Evans, also the written opinion of their legal adviser, the committee have unanimously arrived at the following conclusions, which they respectfully submit for the consideration and action of the board.

1. That the workmanship of the cut-stone of the exterior is good, and the masonry generally, though in some respects not of the best quality, is of a passable character with reference to the terms of the contract.

2. That the interior of the main building is defective in the kind of materials originally adopted, and to a considerable degree in the quality of the materials employed. These consist principally of wood, and are not of a proper character for a building intended to contain valuable deposites, many of which will be donations to the institution, presented with the implied condition that they are to be properly secured against danger from fire. This mode of construction was probably adopted by the original Building Committee, in order to lessen the cost of the edifice, and to bring it within the sum appropriated by the board.

3. Although the committee are anxious to save the accrued interest, and to devote it to objects more in accordance with the spirit of the bequest than the erection of a costly building; yet, they would recommend that the interior work of the centre building, as now existing, be removed, and that there be substituted for it a fire-proof structure, in accordance with the plan recommended in the reports of Mr. Renwick and of the commission of architects.

4. The completion of the building on this plan, according to the estimate of the commission, requires an additional outlay of about $44,000. To meet this additional expense, the committee recommend the adoption of the suggestion of their chairman, Col. Davis, that the exterior of the building and the interior of the towers be completed in accordance with the plan, and within the time specified by the contract, and that the remainder of the interior be finished agreeably to the new plan, in the course of a number of years, and in such portions as can be paid for out of the annual interest of the Smithsonian fund, not otherwise appropriated. The object of this part of the proposition is to prevent the derangement of the plan of finance originally proposed by Dr. Bache, and adopted by the Board of Regents, viz: of saving out of the accrued and accruing interest, after paying for the building, the sum of $150,000, to be added to the principal.

5. By the addendum to the contract, the Regents have the power of stopping the building at any stage of its progress, on paying the contractor *pro rata* for the work done, according to the prices specified in the con-

tract, and allowing for reasonable damages, if the circumstances require the payment of them. The estimates in this case are to be made by the architect of the institution, or other architects selected by the Regents. But with reference to the quality of the work which has been done, it is the opinion of the legal adviser of the committee that the decision of the architect of the building is final, both with regard to the Regents and the contractor.

6. In accordance with the forementioned stipulations of the contract, the committee have requested Mr. Renwick to furnish an estimate *pro rata* for completing the whole exterior of the building, and the interior of the towers, making deductions for materials and workmanship which he would have condemned, had the building been completed according to the original plan. The following is the decision of the architect, which has been agreed to by the contractor, with the understanding that nothing is to be paid him on account of profit on work omitted by the proposed change, viz:

For finishing the whole exterior of the building, all the interior rooms of the towers and of the wings, the sum of -	$185,154

7. The committee recommend to the Board of Regents that they agree to this proposition, and that a resolution be adopted directing the contractor to proceed with the work in accordance therewith. In recommending this course to the board, the committee act in conformity with the advice of two of the commission of architects, viz: Mr. E. B. White and Mr. J. R. Niernsee, who undertook the examination in detail of the parts of the building, and gave an estimate as the basis of an equitable settlement.

8. By adopting the above sum of $185,151, as the amount to be paid to the contractor, Mr. Renwick gives the following estimate of the cost of finishing the building in accordance with the fire-proof plan, viz:

Amount of proposed contract - - - -			$185,154
Expense of fire-proofing the centre building according to plans and estimates of the architects - - - -			44,000
Plastering centre building,	Expenses common to both plans.	$8,000	
Gallery fronts,		2,000	
Staircase of Library and Museum,		425	
Furniture of do. do.		4,700	
			15,125
Extra cartage - - - - - -			200
Materials now on the ground, but which may not be used -			1,000
Total expense of the building, including fire proofing - -			245,479

9. The original contract, with the addition made to it by direction of the Building Committee, is - - -	$209,810
Add the estimate of fire-proofing - - - - -	44,000
Thus we have for the cost of the building, according to the estimate of the commission - - - - -	253,810

NOTE.—The foregoing estimates are exclusive of the salaries of the architect and superintendent; also of the cost of the improvement of the grounds and part of the furniture.

This last sum is greater than the preceding, by $8,331. The difference, according to the statement of Mr. Renwick, is due to the various deductions he has made on account of defective materials, imperfect workmanship, and changes in the plan.

In conclusion, the committee are fully of opinion—and in this they are sustained by the commission of architects—that, by adopting the plan of fire-proofing proposed by Mr. Renwick, and the proposition of the contractor, the building will be rendered safe and durable, at a very reasonable cost, considering the amount of work which has been bestowed upon it.

The committee do not consider it necessary to offer any remarks on the cause of the accident which led to these investigations. If these recommendations be adopted, the whole structure of the interior of the main building, in which the accident occurred, will be exchanged for one more in accordance with the permanence and utility of the edifice; and in this case they will consider the accident as a fortunate event.

All of which is respectfully submitted.

JEFFERSON DAVIS, *Chairman.*
W. W. SEATON.
H. W. HILLIARD.
JOS. G. TOTTEN.
ALEX. D. BACHE.
JOSEPH HENRY.

On motion of Mr. Pearce, it was

Resolved, That the report of the committee of the Board of Regents charged with the examination of the building, presented this day, be accepted; and that the Building Committee be directed to proceed with the work, in accordance with the recommendation thereof.

The following resolution, offered by Mr. Davis and amended by Mr. Fitch, was adopted:

Resolved, That the Executive Committee be authorized to advance to the contractor within the year ending 19th March, 1851, in addition to the sum which he is now allowed to expend upon the building within the aforesaid year, the sum of $17,980, in proportion to work done in addition to what would otherwise have been done, and on condition of his paying interest at the rate of six per cent. per annum upon the said advance from the time at which he receives it to March 19, 1851.

The committee, consisting of the Secretary and chairman of the Executive Committee, to whom was referred a resolution directing them to report a system of keeping and disbursing the moneys of the institution, reported the following resolutions; which were read, and on motion adopted:

Resolved, That the Secretary be authorized to appoint an assistant, to act as treasurer, to take charge of the funds for the current expenses of the institution, who shall give security for the safekeeping of all money belonging to the institution which shall come into his possession:

That the funds before mentioned be deposited, until otherwise ordered, with Messrs. Corcoran and Riggs, to the credit of the treasurer of the institution:

That all bills presented for payment shall be audited and certified by the Secretary, on whose order the treasurer shall pay them:

That the treasurer report to the Secretary, monthly, all payments made by him during the preceding month:

That all the monthly accounts be examined and certified by the Executive Committee quarterly.

That the account-books be kept in the Smithsonian building, so that the Secretary and Executive Committee may have ready access to them.

The Secretary then nominated Mr. Seaton as a suitable person to perform the duties of treasurer, and the nomination was unanimously confirmed by the board.

The Secretary stated to the board that Mr. Seaton would accept the office of treasurer, but would not consent to receive any compensation for his services.

The following resolution, offered by Mr. Mason, was unanimously adopted:

Resolved, That the thanks of the board be, and they are hereby, tendered to the Hon. W. W. Seaton, late mayor of the city of Washington and ex-officio Regent of the Smithsonian Institution, for his able and valuable services as a member of the board, now terminated by the expiration of his term of office as mayor of Washington.

On motion, the board adjourned, to meet on Friday morning, 5th instant, at 9a. m.

JULY 5, 1850.

The Board of Regents held a meeting this day, at 9 a. m., in the east wing of the Smithsonian building.

Present: Messrs. Fillmore, Colcock, Davis, Fitch, and Lenox.

The Secretary stated that vacancies in two committees of the board were occasioned by the retirement of Mr. Seaton; whereupon, on motion of Mr. Fitch, it was

Resolved, That General Totten be appointed a member of the Executive Committee.

Also, on motion of Mr. Davis, it was

Resolved, That Mr. Lenox be appointed a member of the Building Committee.

The Secretary stated that, in order to the development of the plans of the institution, it was necessary that additional assistants should be appointed. With the officers now engaged, little more could be done than to attend to the general correspondence, which now extends to every part of the world, and the details of business, which have been continually increasing. The labor of reading manuscripts and attending to the press, would almost occupy the time of one individual. He therefore requested that he be allowed to appoint an assistant secretary in the department of natural history, to take charge of the museum and aid in the publications, &c.

On motion of Mr Davis, it was

Resolved, That the Secretary be authorized to appoint an assistant secretary in the department of natural history, to take charge of the museum, and to render such other assistance as the Secretary may require, at a salary of fifteen hundred dollars per annum.

The Secretary thereupon appointed Professor Spencer F. Baird under the foregoing resolution; and, on motion, the board approved the appointment.

The Secretary then stated that Dr. Edward Foreman had been engaged during the past year as a general assistant; that he had been elected professor of chemistry in the National Medical College of this city, the duties of which, however, did not materially interfere with his labors in the Smithsonian Institution; and the Secretary requested that his connexion with the institution might be placed on a more permanent basis.

Whereupon, on motion of Mr. Fitch, it was

Resolved, That the Secretary be authorized to appoint a general assistant, at a salary of twelve hundred dollars per annum.

The Secretary thereupon, under the foregoing resolution, appointed Dr. Edward Foreman; and, on motion, the board approved the appointment.

The following resolution, offered by Mr. Colcock, was adopted:

Resolved, That a sum not exceeding twenty thousand dollars be appropriated for the current expenses of this year; the objects of the expenditure to be those designated in the programme of the institution, and the allowance to each to be fixed by the Executive Committee.

The Secretary presented to the board a plan, by Professor Jewett, for stereotyping or electrotyping catalogues of libraries, *by titles,* in a uniform style, and of forming a general stereotype catalogue of the public libraries of the United States. The Secretary stated that this was a proposition which appeared to him of great importance in carrying out the objects of the institution, and in rendering available the aids to literary labor now in our country. He suggested that the proper course would be to refer it to the Secretary and Executive Committee, to be referred by them to a commission of literary gentlemen for examination.

On motion, the subject was referred to the Secretary and Executive Committee.

On motion, the board adjourned, to meet again at the call of the Secretary.

Meeting of the Establishment of the Smithsonian Institution.

Since the adjournment of the board, a meeting of the establishment, or of the Smithsonian Institution proper, was called by order of the President of the United States, and in compliance with the suggestion of the Board of Regents. The principal object of the meeting was the election of a number of honorary members. The following is a copy of the record of this meeting:

August 1, 1849.

A meeting of the establishment of the Smithsonian Institution was held this day, at 5 o'clock p. m., in the eastern range of the Smithsonian building.

Present: Zachary Taylor, President of the United States, and *ex officio* President of the institution.
John M. Clayton, Secretary of State.
Wm. M. Meredith, Secretary of the Treasury.
Jacob Collamer, Postmaster General.
Thomas Ewbank, Commissioner of Patents.
W. W. Seaton, mayor of Washington.
Joseph Henry, Secretary of the Smithsonian Institution.

The President took the chair.

This being the first meeting of the establishment, the Secretary gave an account of the institution, of the plan of organization adopted by the Board of Regents, and of the progress made in carrying the several parts into operation.

The chairman of the Executive Committee gave to the meeting an account of the disbursements of the institution and the state of its funds.

The following gentlemen having been recommended by the Regents and officers of the Institution, and being duly considered by this meeting, were, on motion of Mr. Meredith, unanimously elected honorary members of the Smithsonian Institution, viz:

Dr. Robert Hare, of Philadelphia.
Albert Gallatin, of New York.
Dr. Benjamin Silliman, of Connecticut.
Washington Irving, of New York.

On motion of Mr. Clayton, it was

Resolved, That a committee of three be appointed to draught and report by-laws and regulations for the future meetings of the establishment.

Whereupon, the President appointed Mr. Clayton, Mr. Meredith, and Mr. Seaton, the committee.

On motion of Mr. Collamer, the Secretary of the institution was added to the said committee.

On motion, the meeting then adjourned, to meet again on the call of the President.

Letters have been received from the gentlemen elected, signifying their acceptance of the appointment, acknowledging the honor conferred upon them, and stating their willingness to assist in advancing the objects of the institution.

Since the meeting, one of the distinguished gentlemen chosen as honorary members of the institution has departed this life, full of years and honor—namely, the Hon. Albert Gallatin—distinguished for his attainments in several branches of science, and his additions to the sum of human knowledge. He took a lively interest in the establishment of this institution, and was particularly active in furthering the publication of the first volume of its Contributions. Though we lament his departure, it is a matter of satisfaction that he lived to receive the testimony of the highest honor which the Smithsonian Institution could bestow upon his worth.

REPORT OF THE EXECUTIVE COMMITTEE.

To the Board of Regents of the Smithsonian Institution:

The Executive Committee submit to the board the following report of the expenditures, state of finance, &c., of the Smithsonian Institution:

The whole amount of the Smithsonian bequest received into the United States treasury was $515,169. The interest which had accrued on the same up to July 1, 1846, was $242,129, making in all $757,298.

The Regents were authorized to expend on the building the $242,129 which had accrued in interest, together with such portions of interest on the original bequest as might remain unexpended in any year. They concluded, however, to limit the whole expenditure on the building and the grounds to a sum not exceeding $250,000; and, in order that this might not exhaust the accrued interest, it was resolved that this expenditure should not be made at once, but in the course of five years, and that in the mean time the sum of $242,000, authorized to be expended on the building, should be invested so as to yield an interest which might in part serve to defray the expense of the building. To carry out this plan, the $242,000, with the addition of accrued interest sufficient to make up the sum of $250,000, were invested in treasury notes; and in order that the institution might not be a loser by a possible depreciation of these notes, the contracts for the building were made payable in them at par value or in specie, at the option of the Regents. Up to this time, only $50,000 of these notes have been disposed of. They have thus been made to yield a constant interest, besides increasing in value on account of the rise in government securities. The whole expenditure since the commencement of operations to the present time, is $199,157 21; the whole of which has been made from the accruing interest on the fund and the sale of $50,000 of notes above mentioned.

The following is a synopsis of the present state of the finances of the institution:

Amount of Smithson's bequest - - - -	$515,169 00
Interest due thereon to July 1, 1846 - - -	242,129 00
	757,298 00
Balance on hand January 1, 1850 - - - -	$8,277 35
Treasury notes funded - - - - -	200,000 00
Permanent fund - - - - - -	515,169 00
Present rate of United States loan, 112 per cent.; therefore add - - - - - -	24,000 00
	747,446 35
From this should be deducted, for accounts not rendered -	6,000 00
	741,446 35

The whole amount paid on the building and grounds up to this time is $134,876 21.

From this it appears that, after paying for more than one-half of the building, carrying on the operations of the institution, collecting a library and philosophical apparatus, the sum originally intrusted to the Regents has only been diminished by less than $16,000. The object of this scheme of finance is to increase the original fund, which, though sufficient to establish a library and a museum, is found inadequate to meet the demands which result from the comprehensive plan of organization which has been adopted. The result has thus far been so successful, that there can now be no doubt that, if the same plan be continued until the end of the five years, and the funds do not greatly depreciate, there will remain the sum of $150,000 in accrued interest to add to the principal. To secure this desirable end without the possibility of failure, it may be now advisable to petition Congress to receive from the Regents the sum of $150,000, and place it with the original principal sum, never to be expended, and to complete the building out of the remaining funded notes and the accruing interest.

W. W. SEATON,
ALEXANDER D. BACHE,
JAS. ALFRED PEARCE.

REPORT OF THE BUILDING COMMITTEE.

WASHINGTON, *January* 2, 1850.

The Building Committee have the honor to report as follows:

In the great desire of the contractor to get the whole Smithsonian building under roof before winter, the progress thereon during the year just elapsed has been rapid--that object having been fully attained before the occurrence of severe weather. The Building Committee deemed this result so important for the protection of a large amount of masonry and wood work, that they participated in this desire of the contractor; and did not hesitate to permit an expenditure on the building somewhat larger than the year would have been entitled to under the project of extending the process of construction through a period of five years. It must not, however, be supposed that the expenditures have exceeded the portion of the building fund liable to expenditure under existing resolutions. The portion of this fund thus liable up to the 19th of March next, reckoning from the beginning, is $146,000; the aggregate expenditure on building and grounds now falls short of that sum $10,678 83—which last sum must therefore be the limit of expenditure in the interim—that is to say, from the 1st of January to the 19th March, 1850.

Should the Board of Regents leave the project of a five-years course of construction undisturbed, it will be necessary to lessen, for the next two years, the rate of expenditure on the building. On the other hand, should circumstances lead the board to desire an earlier completion than has heretofore been contemplated, the advanced state of the building resulting from the labors of the past year will be in lucky accordance with such change of policy.

Besides carrying up the walls of the main cell of the building, and finishing its roof, the central front towers and the four corner towers of the main building are carried up as high as the walls of the main building—the central rear tower being 30 feet high.

The architect reports that the stones for the unfinished portions of the building are nearly all quarried; and that the stone-cutting for the campanile south, and two north towers, is nearly completed.

The east and west wings, and ranges, are finished, except some few matters of detail, and are ready for occupation. The workmen are now fitting the west wing with bookcases, for a temporary library; and the west connecting range, for uses connected with the library.

During the past year, with the concurrence of the Secretary of the institution, and under the advice of the architect, the committee have caused the following alterations to be made in the interior arrangement of the building:

The original lecture-room, in the east wing, proving to be entirely too small, the adjoining apparatus and laboratory rooms were removed, and the whole wing formed into one large lecture-room, provided with seats for one thousand persons. By this arrangement, the apparatus rooms in the east connecting range are in close proximity with the lecturer's table; with which, also, direct and easy communication will be had from the large apparatus museum mentioned in the sequel.

This lecture-room, thus enlarged, being capable of containing as many persons as the lecture-room which was originally designed to occupy about half the lower story of the main building, the latter has been dispensed with, and the space thus obtained divided—giving a room of 65×50 feet as a depository of physical apparatus, and throwing the remaining space into the library.

Besides a manifest gain of useful room by this alteration, it tends to security against fire—since the lecture-room, and the researches and experiments connected with it, will be in a separate wing, easily cut off from all the other parts of the structure, by fire-proof doors of iron.

Another change of internal arrangement is as follows: The two stairways, that in the original plan were carried up between the middle north front towers and the main building, have been dispensed with, and the space they occupied added to the library; as also the central hall; and, as before said, a portion of the former lecture-room. By these several alterations, the library has been nearly doubled in area, and a spacious museum obtained for physical apparatus. The central staircase of the north front will now be carried up within one of the front towers.

The changes above mentioned in the interior of the building will be accomplished, on agreement with the contractor, at an extra cost of $100.

It must be considered, however, that the large addition to the library room will require a large addition to the library equipment and furniture. But as it must be many years before the contents of the library can spread beyond its limits, as first planned, and provided for in the contract, the committee would consider it unwise now to incur any portion of this considerable expense.

A clere story to the long upper room, or museum, of the centre building, has been adopted by the committee. The architect states that this was originally contemplated by him, and was explained at the time the contract was made. The committee understand that the adoption of the recommendation was left to further consideration. They were satisfied, however, that it was a necessary modification; the great length of this room—nearly 200 feet—being out of all proportion to the low pitch of 27 feet, originally contracted for. The additional amount for which Mr. Cameron, the contractor, engages to carry out this improvement, is $2,350.

No other alterations have been made in the building, and the committee think no others will be needed: none, at least, that will involve much expense.

The arrangement of the west wing and range for a temporary library and reading-room, has entailed an expense of $372, which should properly, perhaps, be charged to the library fund. It has, however, been comprised in the following statement of expenditures:

The total amount expended on the building, and on the fencing of the lot, including superintendence and all incidental expenses connected therewith, up to 1st December, 1847, was, as then stated - - - -				$25,002 67
The amount expended on the building and its appurtenances, from the 1st of December, 1847, to the 31st of December, 1848, was, as stated in the last annual report,				53,934 74
Total expended on the building, &c., up to the 31st December, 1848 - - - - - - -				78,937 41
The expenditures on the building and its appurtenances during the year 1849 have been as follows:				
Paid Mr. Cameron, contractor for the building,			$50,300 00	
Paid Mr. Renwick, architect, as salary -			1,800 00	
Paid Mr. Renwick for travelling expenses -			266 15	
Paid Mr. Renwick for expenses of architect's office, including incidental expenses of the same, stationery, pay of draughtsman, &c.,			268 25	
Paid Mr. Brown, as superintendent, one year's salary - - - -			750 00	
Paid Messrs. Culver & Co. for three furnaces,			786 11	
Paid Mr. Barrows for one furnace - -			349 52	
Paid Mr. Cassiday for three scrapers - -			3 75	
Paid Mr. Beckert for recoloring east wing -			50 00	
Paid Mr. Buckingham for plumbing - -			12 00	
For additional furniture of library, -		$60 47		
" " "		50 75		
" " "		25 00		
" " "		176 25		
" " "		319 62		
Paid also for temporary library furniture - - - -		372 00		
			1,004 09	
Paid Mr. Cameron for extra work on building - - - -		21 50		
Do do do		31 62		
			53 12	
Paid Mr. Cameron for coal - - -			39 72	
For improvement of grounds—				
Mr. Douglass for trees, &c. -		520 00		
Mr. S. Bryan for plank road -		62 00		
Mr. Cameron, for road-making - - -	45 43			
" "	56 12			
		101 55		
			683 55	
Paid for hack-hire for Building Committee -			17 50	
			56,383 76	78,937 41

Amount expended on the building and its appurtenances up to the 31st December, 1848		$78,937 41
Amount expended on the same during the year 1849		56,383 76
Total amount expended on the same up to the end of the year 1849		135,321 17
At the annual meeting in December, 1847, it was resolved that there should be considered applicable to the building and grounds (including preceding expenditures) up to the 19th day of March, 1848, the sum of	$42,000 00	
And for the year ending March 19, 1849, the further sum of	52,000 00	
And for the year ending March 19, 1850, the further sum of	52,000 00	
		$146,000 00
But, as shown above, the total expenditures to the end of 1849 has been		135,321 17
Leaving, of the building fund, a balance applicable between the 1st of January and 19th of March, 1850, of		10,678 83

The furnaces that have been set up in the building for heating the rooms have not proved satisfactory to the architect, nor to the persons who have occupied some of the rooms. He reports that they do not diffuse the heat equally throughout the rooms—that while some apartments are highly heated, others cannot be made comfortably warm; owing, as he thinks, to the difficulty in conveying the heated air horizontally. He also objects to the number of fires which are necessary in the use of furnaces, and has advised that the other portions of the building should be warmed with steam. The committee have requested the architect to obtain full and definite information of all circumstances involved in the use of steam as suggested by him, and to furnish a report such as will enable a judgment to be formed of its adaptation to our purposes, and of its relative cost. The Secretary of the institution is also engaged in some inquiries of the same nature.

The work entitled "Hints on Public Architecture," authorized to be published by the Building Committee, has been issued, and is submitted to the inspection of the Regents.

The amount expended being somewhat beyond the amount appropriated by the Board of Regents, the committee requested an explanation from the Hon. R. D. Owen, who had superintended the publication of the work. That gentleman states that the landscapes of the lithographs at first executed were so badly done as to be unfit for the press; and that though the lithographer who engraved the building was the only one who would undertake the architectural portion, he did not prove sufficiently experienced in landscape drawing, to render that part of the plates either artistical or effective—this portion was, therefore, re-drawn by another lithographer, at an additional expense of $80: that the remainder of the additional expense was incurred by the necessity of altering the size and form of many of the wood-cuts, in order to enable them to come properly into the letter-press; that this was an unforeseen expense, and could not have been ascertained before the work was about being set up in the printing office: that he was compelled to make the alterations in the cuts, or to destroy the beauty of the pages of the book. These additions to the cost of the work having materially enhanced its beauty, the committee hope the Board of Regents will sanction the course of the Committee in paying the extra charges.

The committee now present a statement of the expenditures as yet incurred, or pledged on the building and grounds, and chargeable to the building fund of $250,000, heretofore set apart.

Total amount appropriated for building and grounds		$250,000
Amount of Mr. Cameron's contract	$205,250 00	
Architect's salary for five years	9,000 00	
Superintendents and draughtsmen for 5 years,	5,000 00	
Incidental expenses allowed architect	2,000 00	
Facing areas with cut-stone	480 00	
Building battlements to cloisters	200 00	
Additional apparatus cases	200 00	
Hedging and planting	1,050 00	
Furnaces already put up	1,135 63	
Addition of clere-story to museum	2,350 00	
Alteration of stairway, &c.	100 00	
Chimneys added to the east wing	400 00	
Sodding ground near building	100 00	
Heating central building with steam, including cellar for boiler and as a coal vault—approximate etsimate of the architect	3,200 00	
Additional furniture and incidental expenses—say	1,000 00	
		231,465 63
Leaving, as applicable to unforeseen expenses connected with the building or grounds, the sum of		18,544 37

A contract made with Mr. John Douglass, jr., for planting and cultivating trees and shrubs within the Smithsonian grounds, and another with the same person for planting and cultivating hedges along the margin of the same, not having been complied with on his part, have been annulled by the committee. The committee are sorry to say, that from these failures the year just past may be considered as almost wholly lost, as respects the establishment of trees or hedges. They look, however, for better results from their future arrangements of this nature.

JOS. G. TOTTEN,
W. W. SEATON,
H. W. HILLIARD.

31st Congress, 1st Session. | [SENATE.] | Miscellaneous, No. 120.

APPENDIX

TO

THE REPORT OF THE BOARD OF REGENTS

OF

THE SMITHSONIAN INSTITUTION,

CONTAINING

A REPORT ON THE PUBLIC LIBRARIES

OF

THE UNITED STATES OF AMERICA,

JANUARY 1, 1850.

BY CHARLES C. JEWETT,
Librarian of the Smithsonian Institution.

WASHINGTON:
PRINTED FOR THE SENATE.
1850.

APPENDIX.

SMITHSONIAN INSTITUTION,
Washington, January 1, 1850.

SIR: I have the honor to transmit to you, in compliance with the duty assigned me, the following report upon the public libraries of the United States, prepared in accordance with the plan of rendering the Smithsonian Institution a centre of bibliographical knowledge.

I remain, very respectfully, your obedient servant,
C. C. JEWETT,
Librarian of the Smithsonian Institution.

To JOSEPH HENRY, LL. D.,
Secretary of the Smithsonian Institution.

PRELIMINARY REMARKS.

Books constitute a large element of the intellectual wealth of a nation. On the shelves of publishers and venders they are an indication of existing demand, and an earnest of usefulness. Nor are they idle even there. The shops of booksellers have, from early times, been the favorite resorts of men of letters. Their contents are, for purposes of reference, more accessible than those of most libraries.

Collections of books for private libraries are also of great public interest. The proprietor of each derives from it his own means of teaching the public. Not only so; private collections are generally made for specific purposes, and are—each in some particular branch of knowledge—as complete as the means of the proprietor will allow. The learning, bibliographical skill, and resources of the collector have been limited to some one object, and that he has pursued to its utmost extent. He has thus formed a complete library in one department. The aggregation of such libraries would constitute a complete universal library. These collections generally become, sooner or later, parts of public collections: such is commonly the wish of the scholars who form them. Therefore, the community may be allowed to watch—so far as they can without intrusiveness—such private accumulations, with interest and satisfaction. In this country, moreover, a narrow and exclusive spirit among book collectors is almost unknown. Gathering for use, and with an appreciating spirit, they are not disposed to debar others from the treasures which they possess. The liberality of proprietors of large collections of books in this country is remarkable, and I believe unparalleled.

But our present object is not to describe private collections. The census board, with an enlightened regard for the interests of letters, have included books, in both public and private libraries exceeding one thousand volumes, among the objects to be enumerated. Mr. John R. Bartlett, before his appointment to the important post which he now holds upon the

Mexican boundary commission, had made considerable progress in procuring from the proprietors of the most valuable private collections such accounts of their literary treasures as would be of public importance, and such as they were willing to have printed. These notes will not be lost, though the publication of them is deferred.

Our immediate concern is with public libraries. It is unnecessary to seek for an exact definition of the word *public* in this connexion. I mean by it libraries which are accessible—either without restriction, or upon conditions with which all can easily comply—to every person who wishes to use them for their appropriate purposes. In this sense I believe it may be said that all libraries in this country, which are not private property, (and indeed many which are private property,) are public libraries.

Of these libraries I have endeavored to collect such historical, statistical, and descriptive notices as would be of general interest; together with such special details as would be beneficial to those who are engaged in the organization and care of similar establishments.

No person who will consider the vast extent of the field to be surveyed, the tedious process by which most of the information is to be collected—namely, by circular letters and private correspondence—the difficulty in this busy land of getting any one to furnish minute information on such subjects, the antiquated statistics, on these matters, which survive all other changes, in gazetteers and geographies, and the fact that there is nowhere in this country a full collection of books and pamphlets relating to the local affairs of the several towns and counties of the different States—no one who will consider these things, and remember that this is but *one* of the topics of inquiry to which I was required to devote my attention, and that, by the other duties of my office, I was prevented from visiting most of the libraries which I wished to describe, will be surprised if he should find that, in some instances, these accounts are not so full nor so accurate as could be desired.

The publication of them, in their present state, is considered a step necessary to their completion and perfection. Copies will be distributed to librarians and others interested in these matters, and all persons who may receive the work are earnestly requested to furnish corrections, additions, and suggestions for a second edition. It is hoped that within a few years materials may be obtained for accurate accounts, embracing all historical facts of importance with reference to every library and every institution possessing a library in this country; and including the history and statistics, with a description of the bibliographical and scientific treasures of each.

The present notices relate almost *exclusively* to libraries. When the library forms but a department (it may be a comparatively small one) of an institution, it has not been the aim to give anything more of the history of such institution than was necessary to illustrate the formation, position or prospects, of the library.

It was at first intended to limit these notices to the answers obtained to the questions of a circular letter.[*] Many of the circulars have, however,

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[*] The following is a copy of the circular letter:

The following questions have been prepared in order to collect as accurate statistics as possible of the various public libraries in the United States:

1. By what name is the library legally designated? 2. When was it founded? 3. What number

remained to this time unanswered; others were filled up hastily, and gave but a meagre account of the collections; others, again, simply referred to some sources from which authentic details might be gathered. In order to give anything like completeness or uniformity to the notices, it was found necessary to re write them, and to seek additional information from all available sources. When the librarian's name is given in connexion with an article, it is an indication that the principal facts were derived from his answers to the queries. When the facts have been gathered from other sources, the authorities have, for the most part, been named.

It is to be regretted that these statistics do not all refer to exactly the same date. They were intended to represent the condition of the libraries at the middle of the year 1849; but when returns were not made, and it was necessary to take the best accounts at hand, these frequently related to a time several years past.

Doubtless many libraries, more important than some which are mentioned in these notices, have been overlooked. The omission is unintentional. It has been utterly impossible to collect, at once, full and reliable accounts of all the libraries, small and large, in the country. This publication will make known our wish to gather all facts worthy of record respecting every one of them; and, in conformity with this plan, we would respectfully and earnestly solicit from the guardians of libraries not mentioned here, or of which the accounts are incorrect or in any way unsatisfactory, to furnish us with the means of improving the work for a second edition. We would direct attention particularly to the following points:

1. The number of volumes of printed books as they stand upon the shelves; the number of pamphlets; the number of manuscripts, in the form of works intended for publication, or of letters, &c.; the number of maps and charts; of loose engravings; of sheets of music unbound, and of bound books of music; the number of coins and medals, pictures, busts, &c., possessed by the institution on the 1st of January, 1851.

2. The expenditure for books, and the number of books purchased, during the year ending December 31, 1850.

3. The number of books lent out, also the number used in the library rooms, during the same period.

4. Important facts not already given with reference to the history of the

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of volumes does it contain? 4. Has it collections of manuscripts, maps and charts, music, engravings, medals, coins, etc? If so, please to state the number of articles of each description. 5. Are the numbers, given in reply to the last two questions, ascertained by actually counting the volumes and articles, or are they from a conjectural estimate? 6. What has been the yearly average number of volumes added to the library for the last ten years? 7. What has been the yearly average expenditure for the purchase of books? 8. Is there a permanent fund for the increase of the library? If so, how large is it, and what sum does it yield annually? 9. How many and what officers are employed? What are the names and address of the present officers? 10. Has a building been erected expressly for the library? If so, when, of what material, and at what expense? 11. What are the dimensions, and what is the ground plan, of the library building or rooms? 12. Are the books arranged on the shelves according to subjects, or on some other system? 13. Is there a printed catalogue of the library? If so, when was it printed, and what is its size, and the number of pages? If more than one, what is the date of each? 14. How often is the library opened, and how long is it kept open each time? 15. Who are entitled to the use of the library, and on what terms? 16. Are books lent out to read? If so, how many are taken out annually? 17. What is the yearly average number of persons consulting the library without taking away books? 18. Have the books been injured at any time by insects? 19. Is there any regulation by which books may be lent by courtesy to persons at a distance? If so, what is it?

library, and the institution with which the library is connected. In this place we would also beg leave, on behalf of the Smithsonian Institution, to solicit for its library the gift of books, pamphlets, or articles, printed or written, relative to the history, condition, or prospects of every literary, scientific, and educational establishment in the country; with catalogues (old as well as new) of all libraries; annual and triennial catalogues of colleges and high schools; and documents relating to common schools, Sunday schools, &c. It is highly important to have upon our shelves the means of tracing the progress of education in this country in the history of schools, colleges, and libraries, from their foundation to the present time. Such a collection would be peculiarly appropriate in a central institution like this. Nothing pertaining to the subject should be thought too insignificant to be sent. Everything will find its place, and, we may safely say, will one day be useful.

5. It would be interesting to have a description, or at least a list, of all remarkably rare and curious books or manuscripts which the library may possess; and we would ask particularly for an account, as minute as may be convenient, of all manuscripts relating to the early history of this country.

To those who have contributed information for this work I beg leave to present my sincere thanks. I have heretofore spoken of the articles contained in the "Serapeum" for 1846, from the pen of Hermann E. Ludewig, esq., of New York, on the libraries of America, as the fullest and most correct account of them that had been published. His was the work of a pioneer. It was faithfully done, and I most cheerfully acknowledge my obligations to him for the assistance which I have derived from his researches.*

MAINE.

AUGUSTA.

State Library—about 9,000 *vols.*—Founded 1836. The average yearly increase is about 500 volumes. From 1840 to 1847, the annual appropriation for the purchase of books was $300; for 1848, $400; for 1849, $400. One of the rooms of the State House (50 feet by 30) is appropriated to the library. It is fitted up with alcoves on two sides—twelve in all. Three catalogues have been printed—the first (60 pages 8vo.) in 1839; the second (105 pages 8vo.) in 1843; the third (120 pages 8vo.) in 1846. Another is in preparation. During the sessions of the legislature the library is open from 8 a. m. to 6 p. m. Books may be taken from the library by the governor, members of the council, senate, house of representatives, heads of departments, judges of the courts, secretary and members of the board of education, and the superintendent of the Insane

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*These notices were brought up to January, 1850, at which time they were presented to the Regents of the Smithsonian Institution. As the printing has been delayed for a year, I have added to them such facts as during the interval have come to my knowledge. These additions improve the notices in fulness and accuracy; but they give them a fragmentary character, which could only be avoided by rewriting many of them—a task which was not consistent with my other duties.

C. C. J.

JANUARY, 1851.

Hospital. The privilege to the members of the legislature, board of education and its secretary, is limited to the time they may be in session. No law books, (excepting those of the State of Maine,) nor books presented by the United States, or any other State, or received through Vattemare's exchange, can be taken from the library except for the use of the two houses, and the committees, at the committee-rooms, during their session. Probably 2,500 persons consult the library each year. Ezra B. French, of Damariscotta, Secretary of State and *ex officio* librarian; Abner Oakes, of Sangerville, assistant librarian.

BANGOR.

Theological Seminary Libraries—7,500 *vols.*—The Theological Seminary at Bangor was incorporated in 1814 as the "Maine Charity School." It was at first connected with Hampden Academy. In 1819 it was removed to Bangor. It is under the direction of the Congregationalists. The library was founded in 1832, and contains 7,500 volumes, selected with special reference to the benefit of theological students; with a few maps and charts, and a great variety of curiosities, collected chiefly by missionaries among the heathen; as ornaments, implements of labor, idol gods, &c., &c. The yearly average increase is about 400 volumes. Annual expenditure for books about $500. There is no permanent fund. It is expected that a building will soon be erected for the library. The books are arranged on the shelves according to subjects. No catalogue has been printed. There are two written catalogues—one alphabetical, the other recording the books as they stand on the shelves. Open twice a week for taking out books, and every afternoon for consultation. Students, officers, trustees, clergymen, and other literary gentlemen in the city of Bangor, are entitled to the use of the library, for which no charge is made. The post of librarian is usually filled by a student of the seminary.

The Society of Inquiry on Missions, connected with the seminary, is in possession of a valuable cabinet and library.—[See History of the Bangor Theological Seminary, by Rev. E. Pond, D. D., in the American Quarterly Register for August, 1841, p. 27.]

BRUNSWICK.

Bowdoin College Libraries—24,750 *vols*.—Bowdoin College was established in 1794, but it did not go into operation till eight years later. The college library dates from the organization of the institution, in 1802, and contains at present (1849) 11,600 volumes. For the last ten years the average annual increase has been about 130 volumes, and the average annual expenditure about $200. There is no permanent fund for the purchase of books, but an annual appropriation of $200 is made from the funds of the college. Since 1846 a granite building has been erected, at an expense of about $40,000; a part of which will be the college chapel, and a part contains the library. The room now occupied by the library is 70 feet long, 30 feet wide, and 18 feet high. There are, besides, two wings, to be used when required—each 70 feet long, 18 feet wide, and 18 feet high. The last printed catalogue was published in 1819, containing 120 pages 8vo. It is now out of print, and, were it to be had, would give a very imperfect idea of the present library. It is expected that a new catalogue will soon be prepared and published. The library is open three times a week, one hour each time. During these hours the use of the library is allowed to all persons, without fee. Books are lent out to the students, resident graduates, officers, trustees, and overseers of the college, and to the clergymen of Topsham and Brunswick. The number of charges for volumes lent is about 3,000 annually. Daniel R. Goodwin, Professor of Modern Languages, is librarian.

There are four libraries belonging to societies of under graduates of the college, viz:

The Peucinian Society library	4,800 vols
Athenæan Society library	3,800 "
(These two libraries are increased annually, each by about 200 volumes.)	
Theological Society library	750 "
Peace Society library	500 "
(The books belonging to the Peace Society were presented by the late William Ladd, esq.)	
The medical department of the college, established in 1820, has a remarkably good library of	3,300 "

The Historical Society of Maine was incorporated February 5, 1822. It has a small library of books, pamphlets, manuscripts and papers, relating principally to the history of Maine. The society has received, during the last year, a grant of land from the legislature, which will yield about $6,000, for the express purpose of erecting a fire-proof building. When such a building is completed, a new interest will doubtless be awakened in the community in behalf of the society, and it is expected that large collections of manuscripts and papers of historic value with reference to the State, now kept in reserve waiting for a safe place of deposite, will be received, and will form an important and valuable library. Professor Alpheus S. Packard, of Bowdoin College, Brunswick, librarian.

HOULTON.

Forest Club Library—200 *vols.*—Aroostook county is situated in the northern forests of Maine. Houlton, the shire town, is nearly 100 miles from any settlement of importance in the United States. It is, however, gratifying to record the establishment in this place of a public library, in July, 1849. The number of its volumes is as yet inconsiderable; but we chronicle its formation with the hope that the notice may, in some humble manner, serve its interests by directing towards it the donations of those who have books to bestow. William Butterfield, librarian.

PORTLAND.

Athenæum Library—6,170 *vols.*—This institution was incorporated March 6, 1827. The library contains (1849) 6,170 volumes. The rate of increase cannot be accurately stated; a new system of supervision has lately been adopted, which will hereafter enable the librarian to give such information. The institution has a fund, now amounting to $3,100, and increasing at the rate of $300 to $500 per year, intended for the general purposes of the Athenæum.

An alphabetical catalogue of 88 pages in 12mo. was printed in 1839. Another was printed, December, 1849, entitled "Catalogue of the Library of the Portland Athenæum; with the By-Laws of the Institution, adopted February 19, 1849." 12mo. Portland, 1849: in 150 pages. The books are arranged in 18 chapters. This catalogue is well compiled and handsomely printed.

The library is open twice a week, 3½ hours each time.

The persons entitled to the use of the library are, proprietors of shares, costing $40 each, and others on payment of $10 annually.

8,150 books were lent out during the last year. James Merrill, librarian.

The following historical account of the Athenæum is from a book just published by Mr. Willis, of Portland:

"This institution is the successor to the Library Society, which was established in 1765, by twenty-six gentlemen, who associated together for that purpose. Previous to that time there was nothing in the form of a library existing in town. The library opened in 1766 with 93 volumes, of which 62 volumes were 'Ancient and Modern Universal History,' 'Rapin's History of England,' 7 vols., 'Lardner's Writers of the New Testament,' 3 vols., 'London Magazine,' 9 vols., &c. Not much addition was made till after the Revolution, during which the small collection was scattered, and a number of the books lost. In 1780 a new attempt was made to resuscitate it, and the fragments were reunited. But it was not till the peace of '83 that any successful movement was made to give it vitality. In May, 1784, twenty-six new members were admitted, who were required to pay two dollars each, in money or books. Others were subsequently admitted on the same conditions. On the 3d of April, 1786, the library was valued at £25; the worth was diminished by the number of broken sets of works which it contained. In 1794, the books were again appraised, and valued at £64 3*s.* 8*d.*, and the price of admission was raised to 42*s.* The committee were this year instructed to purchase Sullivan's History of Maine, Hutchinson's History of Massachusetts, Belknap's Biography, Ramsay's American Revolution and Carolina, and the History of the County of Worcester. These are all American publications and on American subjects. In 1798 they procured an act of incorporation. The library went on slowly, and gradually increasing until 1825, when its number of volumes was 1,640, and its proprietors 82; and the whole annual expense $331. At this period the design was formed for enlarging the institution, and giving it a more elevated and diffusive character, better suited to the wants of the age and spirit of the times. The present Athenæum grew out of these suggestions. It was incorporated in March, 1826; purchased the property of the old library, and the former society was dissolved, most of the members becoming proprietors of the new institution. One hundred and thirty-three persons became proprietors in the Athenæum, at $100 a share, of which $60 only were paid, the principal part of which was invested in bank stock, as a fund towards the support of the establishment. The books go into circulation to all the members who pay a tax of $5 a year, and to others who pay $10. The library, which has been continually increasing to the present time, is now conveniently arranged in the large room over the Canal Bank, and contains (1848) 5,750 volumes of the literature of the days through which it has lived, embracing the best periodical publications and standard works. For its size there are few libraries more valuable. A new impulse has been given to it the present year; upwards of 40 new shares have been taken up, at $40 each. The institution is an honor to the city, and should receive a liberal regard from every citizen who is able to contribute to this unexceptionable public improvement. Charles S. Daveis is now president; and Phineas Barnes, secretary and treasurer."—[Journals of the Rev. Thomas Smith and the Rev. Samuel Deane, pastors of the First Church in Portland, with notes and biographical notices and a summary history of Portland. By William Willis: 8vo., Portland, 1849: pp. 441-2, appendix.]

WATERVILLE.

Waterville College Libraries—8,484 *vols.*—The college was founded in 1820. The college library contains 5,200 volumes; other libraries permanently connected with the college, 3,284 volumes; making a total of books to which students have access, of 8,484 volumes. The average increase is about fifty volumes yearly. The sum of $10,000 is pledged as a library fund, but not yet realized. The library is in a building erected for chapel, library and philosophical apparatus; the building is of brick, and cost about $8,000; the room used for the books is about 30 by 40 feet. A catalogue was printed in 1845, containing 47 pages 8vo. The library is opened twice a week, and kept open half an hour each time. The trustees, faculty, and students are entitled to the use of the books without charge; the students pay one dollar a year for the privilege; other persons are allowed to consult the library, at the discretion of the librarian and library committee. Professor M. B. Anderson is librarian.

DISTRICT SCHOOL LIBRARIES—452 VOLUMES.

"The statute of 1844, chapter 106, authorizes school districts to expend a portion of their money in the purchase of books for a district library. The small amount of school money in a majority of the districts, divided and subdivided as they have been, has rendered it inexpedient to divert any portion of it from the ordinary purposes of the school; and for this reason, but little progress has been made in the formation of school libraries."—[First report of Secretary of the Board of Education, presented May 25, 1847.]

The secretary in his second report (1848) states that eleven districts had established libraries. In the last report (1849) the secretary says "there are but seventeen school district libraries in the State, containing in all 452 volumes."

OTHER LIBRARIES.

Besides the libraries already mentioned, there are doubtless others from which no reports have been received. A correspondent, who is intimately acquainted with the different parts of the State, writes: "There are but few town libraries in the State. A large proportion of our religious societies have what are termed Sunday school libraries; these, however, are made up of works designed more particularly for juvenile readers. Some of our academies have libraries, and there may be a few, but a very few, social libraries. * * We have a large number of valuable private libraries, on which dust is not permitted to gather."

NEW HAMPSHIRE.

CONCORD.

The State Library—4,700 *vols.*—commenced prior to the Revolution, and contains at present (November, 1849)—

Judicial reports	400 vols.
Legislative documents, statutes, &c.	2,486 "
Miscellaneous works	1,625 "
Pamphlets	1,905 "
Maps	28
Atlases	7

For the last two years it has increased about 300 volumes yearly; the eight years previous, about 75 volumes yearly. About $100 per annum have been expended for the purchase of books. There is a standing appropriation of that amount. The library occupies a room in the north wing of the State House, which is 23 feet by 43. A catalogue (57 pages 8vo.) was printed in 1846. The library is open during each day when the legislature is in session. The members and clerks of the Senate and House during the sessions of the legislature, and at all times, the governor and council, judges of the superior court, secretary and treasurer, may take out books, to be returned in one month. Except during a session, any person may take out books by depositing double the value thereof, as security for the return of the book in good order. Few books, however, are lent out in this way—perhaps fifty a year. It is impossible to tell how many consult the library in the room. During the session of the legislature it is generally resorted to by the members. Thomas P. Treadwell, Secretary of State and ex-officio librarian.

The Methodist General Biblical Institute—1,000 *vols.*—This library was commenced in 1846, and contains at present 1,000 volumes and 17 maps. It receives about 250 volumes annually by donation. It is open Tuesdays and Thursdays, during one hour. About 400 books are lent out annually to the students and instructors of the Institute. Professor Osmon C. Baker, librarian.

The New Hampshire Historical Society—1,500 *vols.*—This society owes its origin and much of its early prosperity to the suggestions and active exertions of Mr. John Farmer and Mr. Jacob B. Moore. It was founded March 13, 1823, the two hundredth year after the first settlement of the State, and incorporated the 13th of June following. Its objects are like those of the other Historical Societies in the country. They are thus stated in the first article of the constitution, namely: "To discover, procure, and preserve whatever may relate to the natural, civil, literary and ecclesiastical history of the United States in general, and of this State in particular." The society has published five volumes of valuable collections. The library of the society contained, in 1838, "about 1,500 volumes, a considerable collection of pamphlets and newspapers, a small collection of minerals, some valuable manuscripts, ancient coins and Indian relics." The Hon. William Plumer, its first president, gave to the society several hundred volumes of American state papers, arranged with a copious manuscript index by himself. The Hon. William Bartlett gave his private library, a part of the library of the late Nathaniel Peabody, and a portfolio of autograph MS. letters, amounting to about 200 in all. Deposited in the library "are a considerable number of papers and documents, formerly belonging to the Rev. Dr. Belknap, and used by him in the compilation of the second and third volumes of the History of New Hampshire," transmitted to the society by John Belknap, esq., son of the reverend historian.

An article in the fifth volume of the society's collections, written by Hon. William Bartlett, entitled "*Remarks and Documents relating to the preservation and keeping of the public Archives*," deserves to be particularly mentioned, and commended to the careful perusal of librarians, seretaries of state, and all others to whose care are intrusted the original records of our history.—[See Hist. N. H. Historical Society, in American Quarterly Register, February, 1838, pp. 229-241.]

DUBLIN.

The Union Library, founded in 1793, contains 438 volumes. Proprietors pay $1 50 per share and an annual assessment of 25 cents. 37½ cents per year are paid by those who borrow books. L. W. Leonard, librarian.

Ladies' Library, founded 1799, contains 161 volumes. Mrs. Lucy Marshall, librarian.

Juvenile Library, founded 1822, contains 1,817 volumes on the catalogue; some are *worn out*, some lost; about $16 per year expended for books; the use of the library is free to all persons in town. L. W. Leonard, librarian.

EXETER.

Phillips Academy has a library of about 800 volumes, which has been slowly accumulating since 1783, when the academy was first opened for the admission of pupils. The purchases are made at the discretion of the principal, mostly for the benefit of the instructors.

Connected with the academy is a library belonging to a society of the present members of the institution, containing 1,400 volumes. It is under the immediate care of a librarian chosen each term. It contains valuable books adapted to the wants of the students. Gideon L. Soull, principal.

GILMANTON.

Theological Seminary.—This seminary was established in 1835 by the Congregationalists. The number of volumes in the library is stated in the American Almanac for 1850 to be 4,300.

GREAT FALLS.

Manufacturers' and Village Library—2,200 *vols*.—A catalogue of this library, containing numbers 1 to 1,628, was printed January 1, 1847; 16 pages octavo, with supplements—June 24, 1848, 1 page; March 24, 1849, 4 pages; and March, 1850, 4 pages. Proprietors pay $2 initiation fee and $1 annual assessment. All females in the employ of the Great Falls Manufacturing Company are entitled to the benefit of the library on payment of 25 cents annually.

HANOVER.

Dartmouth College Libraries—20,600 vols.—From various sources, principally from the "Bibliotheca Sacra," April, 1850, we gather the following facts: The college was founded in 1769. From that time it has gradually gathered a library which now contains about 6,400 volumes, and 17 portraits in oil. Among these last are: a full length portrait of the Earl of Dartmouth, a copy of the original by Sir Joshua Reynolds, and a donation of the present Earl; a portrait of Daniel Webster, of Jeremiah Smith, Jeremiah Mason, Francis Hopkinson; a full length portrait of Eleazar Wheelock, the first president of the college; of John Phillips, of Exeter, also full length; of Samuel Appleton, Charles Marsh, &c. The library contains some rare and valuable works, but is deficient in new books.

The libraries of the two societies of students—the Social Friends and the United Fraternity—contain each 6,500 volumes; are well selected, and include many very valuable works, both for reference and miscellaneous reading; some with costly illustrations.

A few years ago a building (costing about $10,000) was erected for the accommodation of the three libraries.

The two society libraries have published catalogues.

The library of the medical department contains about 1,200 volumes.

The Northern Academy of Arts and Sciences—1,300 vols.—This society was formed June 21, 1841, and is composed of the professers of Dartmouth College and a few other gentlemen in the vicinity. It has 800 unbound volumes of pamphlets, etc., partially arranged; also 700 unbound volumes of newspapers. This collection also contains some valuable private papers, among which are a meteorological journal kept by Mr. John Farmer, of Concord, New Hampshire, from 1813 to 1830; Governor Bartlett's correspondence from 1774 to 1794; also a MS. journal of the weather, kept by Eleazar Russell, esq., of Portsmouth, New Hampshire. Efforts were early made to procure for the library complete sets of the first newspapers printed in that part of the country. Spooner's Journal, published at Hanover by Judah C. Spooner and Timothy Greene in 1771, and from February, 1781, at Westminster and Windsor, Vermont, is nearly complete. This paper is extremely valuable, as it was published at the time of the American Revolution, and was the first periodical issued in that part of the country, and consequently contains much of its early history. Complete sets of the Vermont Chronicle, the Boston Recorder, and the Dartmouth Gazette, are also contained in the library.—[See American Quarterly Register, November, 1842.]

MERIDEN VILLAGE, PLAINFIELD.

Kimball Union Academy Libraries—2,000 vols.—The academy library, founded in 1814, contains 1,000 volumes. About $100 per annum are generally appropriated from the funds of the institution towards purchasing books for the library. The endowment of the academy is rich; (about $40,000 in stocks, and $20,000 in buildings.) The library is open Saturdays from 1 to 2 o'clock. The use is free to all connected with the academy. A catalogue was printed some 15 years ago; another will be put to press very soon. C. S. Richards, A. M., principal, and ex officio librarian.

The Philadelphian Society, composed of students of the academy, possesses a library of 1,000 volumes of choice books. It was founded soon after the academy library, and is increased annually, by the voluntary contributions of the members, about 50 to 70 volumes.

NEW HAMPTON.

Theological Seminary Libraries—2,200 *vols.*—The "New Hampton Academy" was incorporated in 1821. In 1826 its name was changed to the "Academical and Theological Institution at New Hampton." The theological department went into full operation in 1833. It is under the care and patronage of the Baptist denomination. The department has a library of 600 well selected volumes.—[See History of the New Hampton Theological Institution, by W. E. Wording, A. M., in the American Quarterly Register for May, 1842.]

The Literary Adelphi of the Academical and Theological Institution at New Hampton, New Hampshire, was founded A. D. 1827, and incorporated by the legislature of the State in 1829. "There are about 800 volumes in the library, most of which are valuable standard works. Efforts are being made to enlarge the library, and several friends have made valuable donations. The reading room is spacious and convenient, and by the liberality of patrons is furnished with about 20 regular newspapers from different parts of the country. Besides this, the society receives several of the most popular and valuable literary periodicals of the present day."—[See note to the "Catalogue of Members of the L. A.;" 12mo. Concord, 1844.]

In the year 1830 a new society, called the Social Fraternity, was formed. It has a library and reading room similar to those of the Literary Adelphi.—[See Wording's History.]

NEW IPSWICH.

The academy at New Ipswich was incorporated in 1789. It has a small library, presented by Samuel Appleton, of Boston. The Demosthenean Society, among the students, has also a small library. A valuable town library was destroyed by fire some years since. The present one is small but well selected.—[New Hampshire Historical Collections, vol. 5, p. 161]

NORTHFIELD.

Library of the New Hampshire Conference Seminary—1,000 *volumes.*

PORTSMOUTH.

Athenæum Library—7,284 *vols.*—Incorporated in 1817. The library contains 7,284 volumes, 159 engravings, and 246 coins. The yearly average increase for the last ten years has been 200 volumes. The annual expenditure, $200. The building now occupied by the Athenæum was purchased for $7,500; it is of brick, with slated roof, three stories high; the first story is used as a reading and newspaper room; the second is the library, and the third a museum and cabinet. The books are arranged on the shelves according to subjects. A shelf-catalogue is prepared, containing the titles of the books as they stand upon the shelves; by this the library is annually examined. A "Catalogue of books in the Portsmouth Athenæum, to which are added the by-laws of the institution and a list of its proprietors," 108 pages 8vo., was printed at Portsmouth in May, 1833; at that time the library contained between 4,000 and 5,000 volumes. A "Catalogue of books added to the library of Portsmouth Athenæum, from May, 1833, to January, 1839," was published at Portsmouth in 1839, 31 pages 8vo.; at this time the library contained 5,300 volumes. This catalogue is alphabetical; the titles are recorded under the names of authors, with cross-references from subjects to authors—the subjects and authors being arranged in one alphabet. This is a very convenient way in a small library. Another "Catalogue of books in the Portsmouth Athenæum, to which are added the by-laws of the institution and a list of its proprietors," 192 pages 8vo., was printed January 1, 1849, at Portsmouth. This catalogue is upon the same plan as the preceding. From a note (page 12) we take the following facts respecting the history of the institution: "In 1829, John Fisher, esq., of London, gave his library in this town, amounting to nearly 300 valuable volumes, to the Athenæum. In February, 1830, James Edward Sheafe bequeathed $1,000 to the Athenæum, which sum was invested in the purchase of books for the library. In October, 1843, Horace Appleton Haven bequeathed $2,000 to the Athenæum—one moiety for the purchase of books, and the other for the preservation of the library. These sums have been invested accordingly." The library is open every day from sunrise to ten o'clock in the evening. Persons allowed the use of the library are: proprietors of shares; and subscribers, who, on the payment of six dollars a year, may read in the library room. Proprietors can take out books, two at a time, which they may change as often as they please. George Jaffrey, librarian.

St. John's Church Library—500 *vols.*

Unitarian Church Library—678 *vols.*

SANBORNTON BRIDGE.

Public Library—300 *vols.*

WAKEFIELD.

Wakefield and Brookfield Union Library—500 *vols.*—This library company was incorporated in 1797. It commenced with thirty members; in 1827 there were forty-four members; in 1849 there are only twenty eight members. The library contains 500 volumes, mostly histories and biographies. William Sawyer, jr., librarian.

SCHOOL LIBRARIES—2,500 VOLUMES.

In the State of New Hampshire there are perhaps twenty-five libraries, averaging 100 volumes each, connected with the district schools.

There are doubtless many small social libraries in this State, from which no returns have been received.

VERMONT.

BURLINGTON.

University of Vermont—12,250 *vols.*—This institution was incorporated in 1791. The library was commenced when the college went into operation, in the year 1800. It contains at present (1849) about 7,000 volumes, as near as can be estimated, without including 5 volumes of atlases and 63 unbound maps. The average annual increase for the last ten years has been about 100 by donation, and about the same number by purchase. About fifty dollars a year were appropriated, previous to 1846, for buying books; since then, seventy-five dollars. There is a permanent fund of $1,250 for the increase of the library, yielding 6 per cent. interest. There is a classified "Catalogue of the books belonging to the library of the University of Vermont," 8vo., 93 pp.: printed in 1836, with supplement (alphabetical) 1842, 8vo., 24 pp. The library is opened twice each week, for one hour. The Faculty of the University use the library without charge. Students pay $1 50 per year for the privilege. Others are allowed the use of it by special permission of the president. Books are lent out, to be returned or renewed as often as once in two weeks. Professor Calvin Pease, librarian.

This is one of the few libraries in the United States selected with competent bibliographical knowledge and with good judgment, and purchased with economy. The college had the wisdom to send a learned, zealous, and active agent to Europe to buy the books, instead of trusting their funds to the cupidity of bibliopoles. The selection was made to meet the wants of the officers of the college, and, consequently, of the students. Somewhat less than two-thirds of the books are in the English language. The collections of Greek and Latin authors are nearly complete, and of the best editions.

A large part of the library of the Hon. George P. Marsh, minister of the United States to Turkey, amounting to between 3,000 and 4,000 volumes, is deposited in this library. Nearly all these works are in foreign languages, principally in the Spanish and Scandinavian. There are, however, some very rare books in the English language. [See Bibliotheca Sacra.]

The libraries of the three societies of students contain, respectively, 2,000, 2,000, 1,250 volumes.

MIDDLEBURY.

Middlebury College Libraries—8,417 *vols.*—This institution was founded in 1800. The college library contains about 5,000 volumes, and occupies a room in a building with the cabinet of natural history, lecture-rooms, &c. A catalogue was printed in 1833, containing 16 pp. 8vo., double columns. The library is opened once a week, and kept open for an hour. The students pay four dollars a year for the use of books. Resident graduates, clergymen in the neighborhood, and others, by permission of the librarian and Faculty of the college, are allowed to take out books without charge. The students have three libraries, namely:

The library of the Philomathesian Society (miscellaneous)	2,200	volumes.
" " Philadelphian Society (religious) -	432	"
The Beneficent Library (mostly text books) - -	785	"

Professor R. D. C. Robbins, librarian.

MONTPELIER.

State Library—3,500 *vols.*—This library contains about 3,500 volumes, maps of the several States, a few engravings, and thirty medals. It occupies a room in the State House, 36 feet by 29, with alcoves, and gallery eight feet from floor, with seven and a half feet above it. Open every day during the session of the legislature and council of censors. The books are not lent out, except to members of the legislature and council, on their becoming responsible for their safe return. Cornelius N. Carpenter, Montpelier, librarian.

Historical and Antiquarian Society of Vermont.—This society was incorporated November 22, 1838. Its library and collections are as yet very small. The president, Henry Stevens, esq., of Barnet, possesses a very valuable collection of books, newspapers, manuscripts, &c., illustrative of the history of the State, amounting to about 1,500 volumes.

NORWICH.

Norwich University Library—1,032 *vols.*—This institution was founded in 1834. The library, commenced in 1843, contains 1,032 volumes and a few maps and charts. The average annual increase is 200 volumes; average annual expenditure, twenty-five dollars. The room is adorned by a full-length portrait of the distinguished and lamented Colonel T. B. Ransom, former president of the college. The library has no permanent fund. It is opened at three o'clock on Saturday afternoons, and at such other times as visitors may desire. The faculty, students, members of the corporation, and donors, are entitled to the use of the books. Ira Davis, librarian.

MASSACHUSETTS.

AMHERST.

Amherst College Libraries—13,700 *vols.*—The college library was founded at the opening of the college, in 1821, and contains 5,700 volumes. The average annual increase is about 120 volumes. Three or four years since, David Sears, esq., of Boston, gave to the college, expressly for the library, an estate, in the city of Boston, which yields $120 per annum. He has since given another, yielding a larger income; and has thus established a perpetual fund, called the "Sears Foundation," which is to accumulate slowly, and mainly for the use of the library. The annual amount appropriated for the purchase of books is at present uncertain; probably not over $300. The library occupies a room in the same building with the chapel and other public apartments; it is about 40 feet by 20. A catalogue (38 pages 12mo.) was printed in 1827; but the most valuable part of the library has been purchased since. The library is opened once a week for taking and returning books. The officers take out books *ad libitum;* the students pay four and five cents for each work; some 200 or 300 are usually out at a time, in possession of the teachers; the students take but few on account of the large miscellaneous libraries of the societies. Professor E. S. Snell, librarian.

The libraries of the two literary societies of students contain, together, 8,000 volumes. The Society of Inquiry has a small museum.

An effort is now making, which it is hoped will be fully successful, to enlarge the college library. The library is, at present, "deficient in even the standard works of science. Ten thousand dollars ought to be given to the college for its library, and an equal sum for a library building."—[Independent.]

"The trustees propose to raise, without delay, $30,000 for the increase of the library and the erection of a suitable library building."—[Boston Traveller correspondent, August 10, 1850.]

ANDOVER.

The Theological Seminary Libraries—20,249 *vols.*—This seminary is under the direction of the trustees of Phillips Academy, which was founded April 21, 1778, and belongs to the Orthodox Congregationalists. The library was commenced in 1808, and contains at present 16,300 volumes. During the last ten years there have been added to the library upwards of 4,000 volumes, including a bequest from the Rev. John Codman, D. D., of Dorchester, of 1,250 volumes. During the same period the expenditure for books has been about $700 per annum. There is a permanent fund of about $12,000, the income of which is appropriated to the purchase of books. The library is in a handsome room in the second story of a brick building, erected in 1818, at an expense of about $19,000, for chapel, recitation rooms, and library. The library room is 60 feet by 40, and about 18 feet high, fitted up with alcoves, and adorned with the portraits of the principal benefactors of the institution. The books are arranged but partially according to subjects. In 1819 a catalogue of 160 pages 8vo., by Professor J. W. Gibbs, now of New Haven, was printed. In 1838 an elaborate catalogue, containing 531 pages 8vo., was published. A supplementary catalogue of 67 pages 8vo. was printed in 1849. The library is opened three times a week, from 1 to 3 o'clock p. m. The persons entitled to the use of the books are, besides the officers of the seminary, students and resident licentiates on the payment of $3 per annum, and others by permission of the faculty. Each student is allowed eight books at a time. Probably 4,000 volumes are lent out in the course of the year. Books may be carried out of town by permission from the faculty. Edward Robie, librarian.

Besides the public library, the following collections are connected with the seminary:

Library of the Porter Rhetorical Society - - -	2,600 vols.
(A catalogue of this library was printed in 1839, in octavo form.)	
Library of the Society of Inquiry - - - -	1,349 "

The library of the Andover Theological Seminary is one of the most valuable in the country. The books mostly belong to the departments of theology and philology. It is a selected library, and not a chance accumulation of volumes rejected from the shelves of a multitude of donors. Profound theological learning, thorough bibliographical knowledge and skill, have for the most part presided over the formation and arrangements o the library. The catalogue, by Rev. Oliver A. Taylor, A. M., now a clergyman in Manchester, Massachusetts, has, we believe, no superior among printed catalogues of libraries. It is on the plan of Audifreddi. The books are placed under the authors' names. The names are in alphabetical order. To the name of each author is appended a biographical note. Annotations upon the books are also interspersed through the work. The catalogue is destitute of an index. To supply one, characterized by the same minute accuracy as the catalogue, would be a difficult and expensive undertaking. We cannot help adding, however, that, if accomplished, it would be a most important aid to theological study, and amply repay the cost of the work. The want of such an index is in a great measure supplied to the students of the seminary by the references given by the professors in their lectures.

"The library has ordered a collection of between 2,000 and 3,000 small books and pamphlets, relating to or written by the Puritans and published in England in the time of Charles I, the Commonwealth, and Charles II. The department in the library which is most fully supplied is that relating to the Christian Fathers, and Church History generally. It has also a good collection of works relating to biblical commentary, criticism, and antiquities. It possesses also many of the best early editions of the Greek and Roman classics and works illustrative of them. It is quite deficient in works on the English language and standard English literature; in the productions of the English and American Puritans; in general works of science which would be suitable to a theological library; in the best later editions of the classics, etc."—[Bibliotheca Sacra.]

Phillips Academy Library - - - -	1,000 vols.
English High School Library - - - -	800 "

BOSTON.

The Boston Athenæum Library—50,000 *vols.*—The Athenæum owes its origin to a society of gentlemen who conducted a literary publication, called the "Monthly Anthology." In the year 1806, they issued proposals for establishing a reading-room to contain the most valuable foreign and American journals, with works of reference suitable to such a place of resort, open to subscribers at $10 per annum. The enterprise proved unexpectedly successful. Many valuable books were presented, and the gentlemen who commenced the undertaking, in order more effectually to secure and extend the benefits of their labor and expense, transferred their right in the Anthology Reading Room and Library to trustees, with power to supply vacancies in their number. At the winter session of the legislature in 1807, the proprietors were incorporated under the name of the "Boston Athenæum."*

The price of a share was fixed at $300. Annual subscribers were admitted at $10 per annum. From these sources, occasional voluntary subscriptions and frequent donations, the institution has risen to its present important position.

The principal endowments of the Athenæum before the year 1847 are thus enumerated in an inscription under the corner-stone of the new building:

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*Snow's History of Boston.

"The sum of $42,000 was raised for the general purposes of the Athenæum, by voluntary subscription for shares created in 1807.

"James Perkins, in 1821, gave his own costly mansion in Pearl street, which from that time has been the seat of the institution.

"In the same year, the sum of $22,000 was raised by voluntary subscriptions for shares.

"Thomas Handasyd Perkins (besides his earlier and later valuable donations,) and James Perkins the younger, seconded, in 1826, the liberality of the brother and the father, each giving $8,000; and the sum of their contributions was increased to $15,000 by other subscriptions, obtained chiefly through the efforts and influence of Nathaniel Bowditch, Francis Calley Gray, George Ticknor, and Thomas Wren Ward.

"Augustus Thorndike, in 1823, gave a choice collection of casts of the most celebrated ancient statues.

"George Watson Brimmer, in 1838, gave a magnificent collection of books on the fine arts.

"John Bromfield, in 1846, gave $25,000 as a fund to be regularly increased by one quarter of the income, of which the other three-quarters are to be annually applied to the purchase of books forever.

"The sum of $75,000, for the erection of the building, was raised by voluntary subscription for shares created in 1844."*

Liberality like this is seldom witnessed, and deserves the most honorable mention.

The institution first occupied rooms in Congress street, whence it was removed to Scollay's buildings, in Court street, and in 1810 to the building on Common (now Tremont) street, north of King's Chapel burial ground. In the year 1822 it was removed to the house in Pearl street presented, as already stated, by James Perkins. In 1823 the King's Chapel Library and the Theological Library, containing together 1,300 volumes of theological works, were deposited in the Athenæum, where they still remain. In 1826 a union was effected with the Boston Medical Library, and its books, valued at $1,500, were added to those of the Athenæum. In the same year, also, an association which had been formed for the purchase of a scientific library became merged in the Athenæum, and its funds, exceeding $3,000, were transferred to the Athenæum to be expended in the purchase of scientific books.—[See sketch of the Boston Athenæum, by Edward Wigglesworth, M. A., in the "American Quarterly Register" for November, 1839.]

In July, 1819, the library was removed to its new home in Beacon street, just above the Tremont House. The location is central, yet free from the dust and noise of crowded thoroughfares. The edifice is elegant, spacious, and convenient. The front is 100 feet long and 60 feet high, in the Palladian style of architecture, and built of freestone. The other walls are of brick. In the basement story are rooms for the packing of books, for a bindery, for the accommodation of the janitor, &c. The main entrance opens into a pillared and panelled rotunda, from which the staircases conduct above. On the first floor are two large reading-rooms, a room for the trustees, and a sculpture gallery, 80 feet by 40. The library occupies the second story, which is divided into three rooms, two in front and the large hall (109 feet by 40) in the rear. The western division of this room is filled with Encyclopedias, Transactions of learned societies, Magazines, and other works in long series of volumes. The other and larger portion is divided into 26 alcoves, and contains about 40,000 volumes. This hall is beautifully finished in the Italian style. The shelving is carried to the height of 18 or 20 feet, and the upper shelves are made accessible by means of a light iron gallery, reached by five spiral staircases. The two front rooms will accommodate some 25,000 volumes. The picture gallery occupies the upper story. It is divided into six apartments, each lighted by a skylight. It is admirably adapted to its purposes. The roof affords a magnificent view of the city and the surrounding country. The whole building is constructed in the most substantial and workmanlike manner.*

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*This sum having been found insufficient for the completion of the building, an additional subscription for two hundred shares has been opened, and is now (April, 1850) nearly filled up.

Besides 50,000 bound volumes, including 1,500 or 1,600 volumes of pamphlets, the library possesses 20,000 or more unbound pamphlets, between 400 and 500 volumes of engravings, and the most valuable collection of coins in that part of the country. For an American library it is rich in certain departments, *e. g.* in the reports and transactions of learned societies, in periodical publications in the English language, works in the natural sciences, &c. It has complete sets of the Transactions of the Royal Society of London, the French Institute, the royal societies of Berlin, Copenhagen, Göttingen, Lisbon, Madrid, Stockholm, St. Petersburg, Turin, etc. It has also the Encyclopédie Raisonné, 35 volumes folio; the Encyclopédie Methodique, 258 volumes 4to., including 37 of plates; Buffon's Natural History by Sonnini, 127 volumes 8vo., &c.†

The institution has lately received a valuable collection of books and papers, once forming a part of the library of General Washington. It contains in all about 450 bound volumes, and from 800 to 1,000 pamphlets unbound, nearly all of which belonged to the library of Washington. About 350 contain his autograph, and a few of them notes in his handwriting. One little book has the autograph of Washington in a rude, school-boy hand, at about the age of nine years. There are several autographs of Augustine Washington, the father of the General; of Mary, the mother, and of Martha, the wife. One book contains on the title-page the autograph of John Custis, (first husband of Martha,) and on the next leaf that of George Washington. One volume has the autograph of Thomas Jenifer, a signer of the Declaration of Independence. There are several presentation copies from eminent authors—Sir John Sinclair, Arthur Young, Ebeling, Altieri, Jefferson, Dr. Morse, and others. Ten volumes contain the name of Richard Henry Lee in his own handwriting. These books came into the possession of the Athenæum in the following manner. General Washington bequeathed his books and papers to his nephew, Bushrod Washington. On the death of Bushrod Washington the library was divided: one portion was left at Mount Vernon, where it still remains; another fell to Colonel Washington. The latter portion included the public papers, afterwards purchased by Congress, and a considerable number of the books, pamphlets, and private papers. The books had been offered for sale. Congress had declined the purchase. Mr. Henry Stevens at last bought the collection, and offered it for sale to the Athenæum. A few gentlemen of Boston and vicinity subscribed the required amount, and presented these precious memorials of the world's best hero to this institution. An elegant descriptive catalogue, prepared by an accurate and accomplished scholar, will soon be published.

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* Literary World, August 11, 1849. †Bibliotheca Sacra, January, 1850.

The Athenæum possesses many valuable paintings and statues. Among the latter is the Orpheus of Crawford, in marble.

Several catalogues of the books have been printed; one, without date, in 266 pages 8vo., in which the books are arranged in 16 classes. Another, and the last, was printed in 1827, and contains 356 pages 8vo. It is alphabetical. A supplement (60 pages) was printed in 1829; a second (80 pages) in 1834. These two supplements, with the other additions to the library up to 1840, were in that year printed together in a volume containing 179 pages 8vo. A complete and elaborate catalogue is now in preparation. The printed catalogues have not heretofore contained the titles of the numerous pamphlets belonging to the library. A neat and accurate catalogue of these pamphlets, prepared by Dr. A. A. Gould, and complete to within two or three years, exists in manuscript.

The present librarian is Charles Folsom, esq. It is highly creditable to the wisdom of the trustees that they have chosen for this important post so ripe a scholar, and so accomplished a gentleman. The influence of such an officer is incalculable; not only in forming far-seeing plans for the increase and arrangement of the collection, but in aiding the researches of learned men, in guiding the studies of youth, and in leading the intellectual pursuits of an educated community.

The library is hardly surpassed, either in size or in value, by any other in the country; and its regulations are framed with the design that it shall answer the highest purposes of a public library. Practically it is such; for each proprietor, besides the right for himself and his family to use the library, may grant to two other persons constant access to it, free of all assessments; and tickets for a month to any number of strangers. Any person, indeed, stranger or resident, may be introduced for a special purpose by a note from a proprietor. Thus, the by-laws open the doors of the institution to a large number of persons; so that the proprietor who bestows on others the free use of all the rights he can impart, renders himself thereby a public benefactor.

The following are the principal regulations of the institution:

The proprietors meet annually on the first Monday of January. The officers are chosen annually. They are a president, vice president, treasurer, secretary, and nine trustees. The trustees appoint a librarian, and sub-librarian.

The price of a share is $300; that of a life subscription $100. Annual subscribers pay $10 for the use of the library and reading room, but are not allowed to take out books.

Every proprietor has, besides his own right, two rights of admission transferable to such persons as he may select. Proprietors and life shareholders, on paying $5 annually, may take books home—not to exceed four volumes at once. Every proprietor and life subscriber may introduce strangers not residing within twenty miles of Boston, and such strangers are entitled to visit the Athenæum for one month from the time of their introduction.

Certain persons by virtue of their offices are entitled to free admission to the Athenæum. These are the governor and council, the lieutenant governor and members of the legislature of Massachusetts for the time being, the judges of the Supreme Court and of the courts of the United States, the officers and resident graduates of Harvard College, of Williams College, of Amherst College, and of the Theological Seminary at Andover, the several presidents of the American Academy, Historical Society, Medical Society, Agricultural Society, Salem Athenæum, and the East India Márine Society of Salem; also clergymen settled in Boston. These last are likewise allowed to take out books on the same terms as proprietors.

The Boston Library—12,150 *vols.*—The first meeting of the members of the Boston Library Society was held the 1st of November, 1792, and the society was incorporated in 1794. At the annual meeting in May, 1849, the number of volumes in the library was 12,150. About 250 volumes, on an average, have been added to the library annually, during the last ten years. The average annual expenditure for books, during the same period, has been, including binding and repairs, $378 69. The library is supported by an annual assessment levied on the proprietors, and by fines incurred. The income from these sources is about $850 per annum.

The apartments occupied by the Boston Library were a donation to the infant society in the winter of 1793–'94 by Messrs. Bulfinch (the architect of the capitol at Washington,) Vaughan & Scollay, "being the hall over the arch of the Tontine Buildings, in Franklin Place." The cost to the society of completing the rooms was $857 57. The society has since purchased, for $1,500 dollars, of the Massachusetts Historical Society, a room of the same area, being the upper story of the building. Each apartment is 37 feet in length by 27 in front, and 33 feet in the rear; from which should be deducted staircase and closets. Catalogues and supplements were printed at various dates, (1795, 1797, 1807, 1815, &c.)

A new and accurate catalogue of 335 pages, 8vo., was printed in 1844, and a supplemental catalogue of 48 pages was completed in September, 1849, to which is appended a list of works relating to America, of 20 pages. The library is opened at 3 o'clock on the afternoon of each Tuesday, Thursday and Saturday, for three hours, or till dark, and on the morning of Saturday from 10 o'clock till 1 o'clock.

No one can take books from the library, except the proprietors, without the special permission of the trustees. The price of a share is $25, subject to an assessment of $3 annually. Each proprietor can take out three volumes at one time. The librarian estimates the number of volumes annually charged to proprietors at 15,000. The number of persons that consult the library, without taking away books, is small; but the trustees cheerfully give every reasonable facility to all persons having occasion to consult the library. Occasional applications for books have been made from the neighboring towns, which have always been granted. George S. Bulfinch, librarian.

The principal object of the society has been to form a collection of books for popular use, admitting none of an injurious moral tendency, and preferring those of solid and standard value. History and biography, (particularly American,) travels, the English and French classics, and fiction, are the departments best supplied. Most of the books have been selected and purchased. The donations have been comparatively few.

For some years after the library was founded, the shares were not trans•

ferable, and subscribers had only the use of the library for their lives; consequently, by the death of original proprietors, many shares have fallen into the common stock; which has given to the shares of present proprietors a value far beyond their cost. Shares are now, however, transferable, and do not cease at the death of the proprietor.

The Library of the American Academy of Arts and Sciences—8,000 *vols.*—This society was incorporated May 4, 1780. Among the scientific associations of the United States, it is next in age to the American Philosophical Society at Philadelphia, which is the oldest in the country. The average annual increase of the library is about 150 volumes. An annual appropriation of about $600 is made from the general fund of the academy for the purchase of books. The library is opened during the day, every week-day. All members of the academy, and strangers, are allowed the use of the books, which may be taken out by any member, or in his name. A catalogue (57 pp. 8vo.) was printed in 1802. Lists of accessions are, from time to time, printed in the publications of the academy. John Bacon, jr., M. D., is librarian. This library contains a valuable collection of the memoirs and transactions of learned societies, reviews and magazines, and of modern scientific works. It is kept in two rooms leased by the society in Tremont Row, No. 7½.

Library of the General Court—7,100 *vols.*—The State library was established by an act of the legislature, passed March 3, 1826, requiring that "all books and manuscripts belonging to the commonwealth, and now in any of the departments of the State House, shall be collected, deposited, and arranged, in proper cases, in the room in said State House usually called the land office." It contains, at present, 7,400 volumes, 80 maps and charts, 5 atlases, 37 railroad plans, 1 portrait, 3 tableaus, and 6 medals. The yearly increase for the last eleven years is as follows:

	Volumes.
1838 - - - - - -	452
1839 - - - - - -	396
1840 - - - - - -	260
1841 - - - - - -	358
1842 - - - - - -	348
1843 - - - - - -	334
1844 - - - - - -	367
1845 - - - - - -	583
1846 - - - - - -	336
1847 - - - - - -	791
1848 - - - - - -	455
Total - - - - -	4,680

Averaging 425 per annum. About $385 per annum has, during this time, been expended in the purchase of books. The regular appropriation for the library has been $300 per annum, with occasional extra allowances "to procure such books, manuscripts and charts, works of science and the arts, as tend to illustrate the resources and means of improvement of this commonwealth or of the United States." "Additions are also made annually of the statutes, legislative journals and documents, and law reports of the United States and of the several States of the Union, received in exchange through the secretary's department. Of *such* works it probably contains a more complete collection than any other library. One thousand and eighty duplicate volumes of laws, public documents, and reports, have been deposited in the law library of Harvard University by a resolve of the legislature.

"The library contains Mr. Audubon's collection of American Birds, in four large folio volumes, at an original cost of about six hundred dollars. An addition was recently made of 440 volumes of French, German and Swedish books of science, arts, history and statistics, some of which are of great value, by international exchanges through M. Vattemare. Among them are the following works, presented by the Chamber of Deputies:—Collection of Etruscan, Greek, and Roman antiquities, from the cabinet of Hon. William Hamilton, Naples, 1766; four large folio volumes, with English and French text, and 520 plates. Presented by the Minister of the Interior:—Monuments of Nineveh, published by order of the government; descriptions by P. E. Botta—designs by E. Flandin: the first ten numbers—*to be continued*. Presented by the Minister of Agriculture and Commerce:—Statistics of France, comprising territory, population, external commerce, etc., from 1837 to 1843; nine large folio volumes. Presented by the National Library of France:—The New Theatre of the World, containing maps, tables, descriptions, etc., of all the regions of the globe; 1639; 3 large folio volumes. This, considering its date, is a magnificent work. The Holy Evangelists, in Arabic and Latin: printed at Rome, in the typographia of Lorenzo de Medici, 1591, large folio; the works of Euclid, in Arabic: printed at Rome, in the 16th century, folio; Acta Historica Ecclesiastica Nostri Temporis: printed at Weimar, 1741 to 1774, *extremely rare*, 43 volumes. Presented by the King of Sweden:—History of the Kingdom of the Moors until their expulsion in 1726, in Arabic and Latin: edited by Professor Tornberg, 2 volumes in one; Ancient Sweden, etc., with 3 volumes of plates of its provinces, cities, buildings, etc., in oblong quarto. The choicest volumes in the State library to a descendant and admirer of the Puritans, and indeed to any true son of New England, are the ancient General Court Records of Massachusetts. They are copies, in manuscript, of original papers in the archives of the Secretary of State, and make 31 large folio volumes. The Records commence with 1629 and extend to October, 1777, and contain the entire legislative and much of the religious history of Massachusetts between those periods. Each volume has a copious index at its close, containing the names of *persons* and *places*, also a list of subjects spoken of, in separate columns, which facilitates reference, and greatly increases the value of these treasures of our colonial history. No books in the library are consulted more frequently or with more interest. Since the first volume was transcribed, several pages have been inserted at the beginning, containing records of a still earlier date."*

The secretary of the board of education is, by a recent law, made *ex-officio* librarian, and is allowed an assistant. Two rooms in the State House are appropriated to the library; one of them is 51 feet by 22, and the other 36 by 25. The books are arranged in cases with glass doors, and generally according to subjects. A catalogue (43 pp. 8vo.) was published in 1831; another in 8vo. was printed in 1839. The last catalogue (125 pp. 8vo.) was printed in 1846. The library is open every weekday from 9 a. m. to about sunset, and, during the session of the legislature, sometimes in the evening. Books are lent to members of the legislature and officers of the State. Rev. Barnes Sears, D. D., secretary of board of education, and librarian; Rev. Charles T. Jackson, assistant.

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*Bibliotheca Sacra, January, 1850.

Mercantile Library—7,059 vols.—The Mercantile Library Association was founded March 11, 1820, and incorporated in 1845. The library contains 7,059 volumes. The average annual increase for the last ten years has been 400 volumes; the average annual expenditure $375. There is a fund of $16,100, yielding six per cent. per annum, for the support of the library. The library is in two rooms, each 80 feet by 35. The arrangement on the shelves is according to the date of purchase. A catalogue was printed in 1848, consisting of 135 pages 8vo. The library is open every week-day evening till ten o'clock. Any person engaged in mercantile pursuits may acquire the right to use the library by paying two dollars per annum. Books are lent out, twenty-eight thousand annually. John Stetson, president.

The library is composed of such works in the field of general literature as are suited to the tastes and wants of merchants and merchants' clerks. In the reading-room are 89 newspapers and 21 reviews and magazines.

The number of members of the association is now 1,145. An annual course of lectures is delivered by distinguished gentlemen. The members participate in exercises of debate, declamation and composition. The whole number of tickets for the lectures in 1848–'9 was 1,300.*

Library of the Massachusetts Historical Society—7,000 vols.—The foundation of the Massachusetts Historical Society was originally suggested by Rev. Jeremy Belknap and Mr. Thomas Walcutt. It was organized in 1791, and incorporated in 1794. The number of members is limited by the act of incorporation to sixty. The library contains about 7,000 volumes, inclusive of bound newspapers; about 2,000 unbound pamphlets, 300 maps and charts, 450 volumes of manuscripts, a few coins, and 70 portraits. It increases about 100 volumes annually, wholly by donations. The society possesses no funds, not even for the support of a librarian. The entrance fees and annual assessments go for binding and other charges. The library occupies rooms in a stone edifice, erected in 1833. These rooms were purchased by the society for $6,500; $5,000 of which were collected by subscription at that time. These rooms are 84 feet by 40 in their whole length and breadth. The books are placed upon the shelves according to size, without regard to subjects. Two catalogues have been published—the first, 40 pages 8vo., in 1796; the second, compiled by Rev. Timothy Alden, 96 pages 8vo., was printed in 1811. The continuation is in manuscript. The library is open daily from 9 a. m. to 1 o'clock p. m., and from 3 to 6 p. m. It is accessible to members and others pursuing historical investigations. About 200 volumes a year are lent out. About 1,000 persons a year consult the library without taking away books. By permission of the standing committee, books may be lent to persons at a distance. Rev. Joseph B. Felt, librarian.

"Among the most valuable treasures belonging to this society are the manuscripts of the historian Hubbard; of the first Governor Winthrop, 11 volumes; of Governor Hutchinson; of Governor Jonathan Trumbull, of Connecticut, 23 volumes; the manuscript of Washington's Farewell Address to the officers of the American army. The society has also 98 folio volumes of Commercial Statistics of the United States, embracing the years from 1816 to 1842 inclusive, drawn up with care, and very complete. There is a copy of Eliot's Indian Bible in the library. Thirty volumes of Collections have been printed, in three series, of 10 volumes each. The last volume of each series contains a full index of all the volumes in the series. The portraits of about seventy persons, mostly New England worthies, adorn one of the rooms. Some of these are of special value, *e. g.* the portraits of Rev. Increase Mather and of Rev. John Wilson."*

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*Bibliotheca Sacra, January, 1850.

An interesting "Account of the Massachusetts Historical Society," prepared by William Jenks, D. D., of Boston, was printed in the American Quarterly Register for November, 1837, pages 166-177.

The Mechanics' Apprentices Library—4,000 *vols.*—This institution claims the distinction of being the first of its kind established in the world.† It is due to the wise suggestion and philanthropic energy of Mr. William Wood, now living in Canandaigua, New York. Lord Brougham remarks, that "although the remote origin of these institutions may be traced to Franklin, Mr. Wood has the merit of establishing them on their present plan, and adapting them peculiarly to the instruction of mechanics and apprentices. He founded the first in Boston, in 1820."

Mr. Wood has been actively engaged in the formation of libraries of a similar character in most of our large cities, and has even extended his benevolent efforts to the cities of the Old World. In his own words, "from the establishment of this library, in 1820, until now, as opportunity offered, the circulation of books, in any shape which might do good, has been the hobby of a life now drawing to a close." The name of this gentleman deserves to be held in lasting and grateful remembrance as a public benefactor.

Mr. Wood's efforts to collect a library for apprentices in Boston were warmly seconded by several distinguished citizens, and about 1,500 volumes were soon collected. The library was a gift from the public to the apprentices of Boston. On the 22d of February, 1820, it was formally intrusted to the guardianship of the Massachusetts Charitable Mechanics' Association, a society of long standing and established reputation. They agreed to take upon themselves the management of the institution on condition that they should not be chargeable with its incidental expenses.

The library was accordingly opened and the apprentices gratuitously supplied with books; the expenses being defrayed by public subscriptions. After a few years these subscriptions ceased, and the doors of the library were consequently closed. The apprentices feeling keenly this deprivation, held a meeting and agreed to take upon themselves the cares and responsibilities of the establishment, if the association would appropriate a small amount to aid them in the undertaking. This request met with a favorable answer. The present Association of Apprentices was formed June 19, 1828; and the library committed to their entire control in 1832, by the Mechanics' Association.

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* Bibliotheca Sacra, January, 1850.

† For a full and interesting history of this institution, see an address delivered before the association on its 24th anniversary, by Frederick W. Lincoln, jr., Boston, 1844, from which this account is substantially taken.

The association consists entirely of apprentices to mechanics and manufacturers—of course embracing only minors. Any young man who is an apprentice to a respectable mechanic, (and learning a mechanical trade,) on producing a certificate that he is worthy of confidence, paying into the treasury the sum of one dollar per year, and signing the constitution, shall be a member. The affairs of the institution have been very ably and successfully conducted by its youthful members.

The association occupies two rooms in Phillips Place, opposite the head of School street; the one for reading and lecture room, (say 30 feet by 40,) the other (say 30 by 15) for library and conversation room. The library is well selected to promote the intellectual culture of the class for whom it was intended. The reading department contains the principal newspapers and periodicals of the city, and many from different parts of the country, and is in a most flourishing condition. A cabinet of minerals and curiosities has been commenced; an annual course of free lectures is supported by the institution; an elocution class has been formed, the exercises of which consist in the reading of original compositions, declamation, and debate.

The yearly average increase of the library for the last ten years has been 175 volumes. A catalogue was printed in 1847, containing 68 pages 12mo.

The library is open three hours every Tuesday and Saturday evening. About 10,000 volumes are lent out annually. Robert H. Howell, jr., is the present librarian.

Library of the American Board of Commissioners for Foreign Missions—3,500 vols.—This library was founded in 1822, and contains, besides 3,500 volumes, a few manuscripts and valuable maps. The average annual increase is about 150 volumes. The library is in the Mission House, Pemberton Square. There is a catalogue, but it has not been printed. The collection is designed mainly for the use of the officers of the board, and is always accessible to them. The books are occasionally lent to persons investigating subjects relating to missions. It is designed to be a library for reference on subjects connected with the work of foreign missions; is in no sense a circulating library, and nothing is paid for the use of the books. Books may be lent to persons at a distance by consent of the prudential committee. Rev. S. L. Pomroy, D. D., Secretary A. B. C. F. M.

Library of the Boston Society of Natural History—3,500 vols.—The Boston Society of Natural History was founded in the winter of 1830, and incorporated February 24, 1831. Its great design is to "promote a taste and afford facilities for the pursuit of natural history, by mutual co-operation and the collection of a cabinet and library." The society has been conducted with much energy. It holds regular and frequent meetings, issues a "Journal," and has collected a valuable cabinet and library. "When the society originated, the great difficulty in the way of making advances in the study of natural history was the want of books. When we consider how essential a library is to the study and arrangement of every department of the cabinet, it cannot but be felt that the society have done wisely to contribute largely towards it. It is of vital importance that the naturalist who is engaged in the investigation of any subject, should be able to know *all* that has been written upon his subject. Scientific books are expensive, and no man among us can promise himself such a library as he may need."—[See notices of Boston Society of Natural History, by Dr. A. A. Gould, in the American Quarterly Register, February, 1842, pp. 236, seq.]

The library contained (1849) about 1,600 volumes* and a small number of maps and engravings. The yearly average increase is about 100 volumes. The average annual expenditure for books is about $200. The society has a permanent fund of about $12,000—$10,000 of which were received from a bequest of Ambrose S. Courtis, esq., $300 from a grant by the State, and $500 from the legacy of Simon E. Greene, esq.—one third of the income of which is, by vote, appropriated to the library. This arrangement is liable to alteration. The society owns a brick building with iron shutters. This contains the library and cabinet, and cost $30,000. The library room is 30 by 26 feet. The centre building is 40 by 30 feet, with two wings 26 by 30 feet each. The last catalogue was printed in 1837, and contains 27 pp. 8vo. The library is open daily from 9 till 1 o'clock. Individuals not members of the society are freely allowed to make use of the books on application. About 300 volumes are taken out during the year, and about 150 different persons consult the library yearly without taking away books. Books are lent to persons at a distance who are known to be engaged in scientific pursuits requiring them. The library committee has power to lend them, and so may any member he being responsible for their safe return. Charles K. Dillaway, librarian.

"It is expected that the choice library of Dr. Amos Binney, formerly president of the society, will be incorporated with that of the society. Both will form a fine collection of the most important works in natural history in the English and French languages."†

The American Oriental Society—400 *vols.*—though yet in its infancy, has commenced the collection of a library. It contains only a few hundred volumes, 68 Muhammedan coins, 17 Arabic MSS., 1 Syriac MS. of a portion of the Old Testament, (600 years old,) and 5 Turkish MSS. These are all donations. The books are lent out only to the members of the society. The collection is at present deposited in the Boston Athenæum. Francis Gardner, librarian.

The Library of the American Statistical Association—2,000 *vols.*—This society was formed November 27, 1839, and incorporated January 7, 1841. Its purposes are to collect, preserve, and diffuse statistical information.—[See a notice of the society in the American Quarterly Register for May, 1841, pp. 451, seq.]

The Library of the New England Genealogical Association—1,500 *vols.*—The New England Historic Genealogical Society was incorporated the 17th March, 1845. Its object is "to collect and preserve the genealogy and history of early New England families." Its library is mostly the fruit of donations, and comprises most of the local histories of New England. The New England Historical and Genealogical Register, published quarterly under the auspices of the society, is a valuable repository of facts relating to the early history of the country.

The Social Law Library—3,000 *vols.*—This library occupies a room in the court-house. A catalogue containing 32 pp. 8vo. was published in 1824.

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* In the report in 1850, the number is stated at 3,500 volumes.

† Bibliotheca Sacra, January, 1850.

The Bowditch Library—2,500 *vols.*—The late illustrious mathematician, Dr. N. Bowditch, collected a valuable scientific library of about 2,500 volumes. Since his death, his family, with a liberality worthy of their name, have allowed to the public the free use of the books. Although, therefore, this collection is private property, its public usefulness requires that it should find a place in notices of the public libraries of Boston. The proprietors have, we believe, expressed a desire, in case the city should erect a proper building and actively undertake to establish a public library, to bestow their shares upon such an institution. But no provision has yet been made for rendering the library permanently public. The proprietors have established the following "rules for the Bowditch Library, at 8 Otis Place, Boston:

"As this library is peculiarly valuable from the circumstance of its former ownership, it is particularly requested that books taken from it be used with care and returned punctually, subject to the following rules:

"1. No person will be allowed more than four volumes at a time.

"2. If any book be lost, it must be replaced, *although, of course, the loss can never be entirely supplied.*

"3. No book must be kept from the library more than three months, without being renewed upon the record book.

"4. All books must be returned on or before March 1st, of each year, for examination. After the 20th of the same month the library will be again opened.

"5. Omission, for the space of one week, to comply with the requisitions contained either in the third or fourth rule, deprives the party in default of the right thereafter to use the library, unless two at least of the proprietors are satisfied that the neglect is excusable, or are willing to pass over the omission.

"March 16, 1846."

About 250 volumes are taken out annually. None have been lost.

The Prince Library—1,800 *vols.*—"The Old South Church (Congregational) in Boston possesses a valuable collection of books and MSS., bequeathed to the church by Rev. Thomas Prince, one of its pastors, (the learned author of 'the Chronological History of New England,' &c.) Mr. Prince, while in college, in 1703, began a collection of books, and public and private papers, relating to the civil and religious history of New England, to which he continued to make valuable additions for more than fifty years. It is a precious collection, containing many standard works in church history and biblical literature and theology, the works of the early divines of New England, and valuable pamphlets and MSS."—[Bibliotheca Sacra, January, 1850.]

Mr Prince's will was proved in 1758. Since that period, or nearly one hundred years, this has been the public library of that Church, and accessible to any person desirous of using it for literary purposes.

It appears from Mr. Prince's will, that he had made a separate collection (to which he gave the name of the New England Library) of books, papers, &c., either published in New England or pertaining to its history and public affairs. This collection he gave also to the Old South Church, on condition that it should be kept in a different apartment from the other books, and "that no person shall borrow any book or paper therefrom, but that any person whom the pastors and deacons of said Church shall approve, may have access thereto." In 1814, 259 works, as they are numbered on the catalogue, belonging to this library, were deposited in the rooms of the Massachusetts Historical Society. A "catalogue of the library of Rev. Thomas Prince, former pastor of Old South Church, presented by him to the Old South Church and Society," in 112 pages 8vo., was printed at Boston in 1846. It is to be regretted that a catalogue so well printed should be so badly arranged, or rather so entirely destitute of all useful arrangement.

CAMBRIDGE.

Harvard College Libraries—84,200 *vols.*—On the 24th of January, 1764, in a stormy winter's night during the college vacation, Harvard Hall, containing the library of more than 5,000 volumes, the philosophical apparatus, and all the little collections of objects of interest belonging to the college, was destroyed by fire. "Thus perished the valuable books given by John Harvard, Sir Kenelm Digby, Sir John Maynard, Dr. Lightfoot, Dr. Gale, Bishop Berkeley, and other distinguished benefactors; the books and pamphlets connected with the early history of New England, the precious, though scanty, accumulations of a hundred and twenty-six years—a loss which in those days must have seemed appalling, and which the historian, the antiquary, and the bibliographer can never cease to deplore."

The State legislature was in session. Indeed, at the time of the calamity, Harvard Hall was occupied by them in consequence of the alarm excited by the existence of the small pox in Boston. At the instigation of Governor Bernard, they immediately appropriated £2,000 to erect a new building in place of that which had been destroyed while occupied by them. A general subscription was made for the same purpose among the towns and counties of the State, amounting to £878 16*s.* 9*d.** A generous sympathy was shown by many persons in the parent country. The subscription of Thomas Hollis, for the new building, was £200. The friends of the institution manifested not less zeal and liberality in supplying the new hall with books. The General Assembly of New Hampshire gave books to the value of £300 sterling. The Society for propagating the Gospel in New England and adjacent parts gave £200 sterling, and the Society for propagating the Gospel in foreign parts gave £100 for the library. In 1790 the library had increased to 12,000 volumes; in 1830, to 30,000. It is almost entirely the fruit of individual munificence. First among its distinguished benefactors stands the name of Thomas Hollis, whose "deeds of peace" entitle him to our warmest respect and gratitude. The books which, during the first ten years of the present library, he placed upon its shelves, were very numerous,† admirably chosen, and many of them elegantly bound, and containing curious and interesting notes in his own handwriting. At his decease, in 1774, he bequeathed to the college a sum of money which now constitutes a fund of $3,000, the interest of which is laid out in the purchase of books. In a note in Giggeius' Thesaurus Ling-Arab., he states that he has "been particularly industrious in collecting grammars and lexicons of the oriental *root* languages, to send to Harvard College, in hopes of forming by that means, assisted by the energy of the leaders, always beneficent, a few *prime scholars*, honors to their country and lights to mankind."

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* See sketch of the history of Harvard College, by Samuel A. Eliot, Boston, 1848.

† The arrivals of 43 "cases" are noted on the records at different intervals during this period.

Thomas Brand Hollis gave to the library many excellent books, and at his decease, in 1806, one hundred pounds sterling. Hon. John Hancock, in pursuance of the known intention of his uncle, Thomas Hancock, whose estate he inherited, presented to the library in 1767 five hundred and fifty-four pounds sterling. He gave for himself, also, "a large collection of chosen authors." Thomas Palmer, of Boston, in 1772, presented "the Antiquities of Herculaneum, and Piranesi's Views of Rome, in 20 folio vols.;" and at his decease, in 1820, bequeathed his library of nearly 1,200 "choice and costly volumes," valued at $2,500. Samuel Shapleigh, librarian of the university, in 1801, gave a piece of land and the residue of his estate for the increase of the library. The sum obtained from this bequest was $3,000, the interest of which is applied to the purchase of books in modern literature. Israel Thorndike, of Boston, purchased and presented, in the year 1818, the celebrated library of Professor Ebeling, of Hamburgh, containing 3,200 volumes of works mostly relating to America, and a collection of 10,000 maps and charts, "probably unrivalled by any other collection of the kind in the world." The whole cost $6,500. In 1823 Samuel A. Eliot, of Boston, purchased and presented the valuable collection of books relating to America of D. B. Warden, consisting of 1,200 volumes, besides maps, prints, and charts,* costing $5,000. The "Boylston Medical Library," of more than 1,100 volumes, was presented by Ward Nicholas Boylston. The sum of $2,600, given to the university in 1825, by Hon. Peter O. Thacher, "from a fund left him in trust by the late William Breed, esq., of Boston," was applied by the corporation to the purchase of books for the library. The Hon. Christopher Gore, who had previously enriched the law library by frequent and valuable donations, at his death, in 1831, left by will to the college the residue of his estate, of which $38,000 are reserved for annuities bequeathed by him. The whole ultimately receivable by the college amounts to $94,888. From this fund Gore Hall, the present library building, has been erected. In 1842 the sum of $21,008 was subscribed by thirty-four gentlemen in Boston and vicinity, for the purchase of books; not as a permanent fund, but for use when wanted. In 1844 Horace A. Haven bequeathed, for the purchase of mathematical and astronomical works for the library, the sum of $3,000. In 1845 the Hon. William Prescott bequeathed $3,000, which has been expended for books on American history, topography, &c. In 1846 Hon. Thomas Grenville, of London, gave, through President Everett, £100 for the purchase of books for the library.†

The library of the university is at present divided into four departments viz: public, law, theological, and medical.

The public library contains 56,000 volumes of printed books and bound manuscripts. The volumes in the library were counted July 11, 1849, and found to be 55,605. Including the additions since made, the number may be put down at 56,000; this includes the bound manuscripts. The unbound pamphlets and serial works are estimated, exclusive of duplicates, to be 25,000; they probably exceed this number. No enumeration of MSS. separate from the foregoing has been made. In 1819, seven Greek MSS. were procured in Constantinople, one a fragment of an Evangelistary, probably of the ninth century; there are some Latin MSS., and several oriental MSS., in Arabic, Persian, Hindostanee, Japanese, etc. Of Roman coins and medals, the library has 671 in copper, 43 in silver, and 1 in gold; of ancient coins other than Roman, 8; there are about 500 modern coins of all sorts, and 35 modern medals. The annual increase of the library since 1832 has been as follows: For the years ending—

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* Mr. Warden subsequently made a second collection, which was bought by the State library of New York.

† I have been able to notice only the most important donations to the library. For a full list of them, see the appendix to Eliot's History of Harvard College; compare also the preface to the catalogue, by Benjamin Pierce.

		Volumes.	Pamphlets.		Vo'umes.	Pamphlets.	
July 13, 1832	-	1, 299,	255,	including	502 and	190	given.
July 12, 1833	-	602,	212,	do	156	204	do
July 11, 1834	-	815,	737,	do	371	733	do
July 10, 1835	-	227,	184,	do	156	181	do
July 15, 1836	-	1, 343,	237,	do	384	153	do
July 14, 1837	-	1, 043,	205,	do	310	185	do
July 13, 1838	-	803,	209,	do	317	172	do
July 12, 1839	-	551,	532,	do	238	532	do
July 10, 1840	-	251,	249,	do	161	242	do
July 9, 1841	-	881,	1, 402,	do	270	1, 119	do
July 11, 1842	-	840,	700,	do	419	700	do
July 11, 1843	-	1, 353,	1, 597,	do	322	1, 421	do
July 9, 1844	-	3, 645,	1, 333,	do	453	1, 318	do
July 15, 1845	-	2, 928,	3, 806,	do	652	3, 122	do
July 14, 1846	-	2, 018,	3, 477,	do	679	3, 319	do
July 13, 1847	-	1, 762,	3, 321,	do	1, 072	3, 205	do
July 11, 1848	-	1, 523,	2, 632,	do	540	2, 520	do
July 11, 1849	-	724,	1, 645,	do	326	1, 580	do.

As the books bought for the last seven years have been procured with the money subscribed in 1842, they are to be considered as donations; so that all the additions since 1842 are strictly gifts. The only permanent fund for the increase of the library yields $450 per annum. In 1842, the sum of $22,000 was raised by subscription, to be applied to the purchase of books, but not as a permanent fund. This sum is now reduced to $5,883, which will probably be entirely expended in the course of two or three years. Among the late additions are works in modern English literature, German literature, with the classical and other departments, scientific works, etc.*

The only permanent fund for the increase of the library is the combined Hollis and Shapleigh fund, which yields about $450 per annum. The principal is $6,000. The public library is kept in Gore Hall, the foundation of which was laid April 25, 1837, and to which the books were removed July, 1841. The outer walls of the building are of rough stone (Quincy granite, or sienite,) laid in regular courses, with hammered stone buttresses, towers, pinnacles, drip stones, &c. The inner walls, columns, and the main floor (which rests on solid brick arches) are of brick, the floor covered with hard pine boards; the other parts finished with plaster. The partitions are strengthened with iron columns concealed within them, and the roof and galleries rest on iron rafters. The whole cost, including the heating apparatus, was little short of $75,000. It is in the form of a latin cross, the extreme length of which externally is 140 feet, and through the transept 81½ feet. The interior contains a hall 112 feet long and 35 feet high, with a vaulted ceiling, supported by 20 ribbed columns. The spaces between the columns and side walls are divided by partitions into stalls or alcoves for books above and below the gallery, which is 12½ feet from the floor. One transept is used for a reading-room, and the other is divided into three apartments for books. (See Quincy's History of Harvard University, II, page 599.) The books are arranged according to subjects.

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*Bibliotheca Sacra, January, 1850.

A catalogue of the old library in 102 pages 4to. was published in 1723, with the title, "Catalogus Librorum Bibliothecæ Collegii Harvardini quod est Cantabrigiæ in Nova Anglia. Bost. Nov. Angl. typis B. Green."

After the burning of the library a "Selectior Catalogus in usum Academiæ Alumnorum" was published, but no copy of it exists in the library.

Another, "Catalogus Bibliothecæ Harvardianæ. Cantabrigiæ, Nov. Anglorum. Bostoniæ, typis T. and J. Fleet, 1790;" 8vo., 358 pages.

The last printed catalogue is entitled: "A Catalogue of the Library of Harvard University, in Cambridge, Massachusetts; 3 vols. 8vo. Camb., 1830."

This catalogue was prepared by Benjamin Peirce, then librarian. The first two volumes (952 pages) contain an alphabetical catalogue. The 3d volume (223 pages) contains a systematic index, in the five classes: theology, jurisprudence, arts and sciences, belles-lettres, history; with a sixth division, comprising works relating to America. Each class has numerous subdivisions.

As a 4th volume, was published "A catalogue of the maps and charts in the library of Harvard University, 8vo. Camb., 1831;" 322 pages; also prepared by Mr. Peirce.

A "First Supplement" to the catalogue, prepared by the present librarian, was published in 1834, (260 pp. 8vo) containing the additions to the library up to September 1, 1833.

All officers and students of the University, officers of the State government and members of the legislature, clergymen of all denominations living within ten miles of the library, benefactors to the library to the amount of $40 during their residence in Cambridge, and all persons temporarily residing in Cambridge, for purposes of study, may borrow books from the library, under certain conditions prescribed in the laws. "A ready admittance, and the requisite information and facilities for examining and consulting the works, are afforded to all visitors. The privileges granted to individuals are not exceeded by those enjoyed at any other institution of a similar kind, and are believed to be in all respects as great as a due regard to general accommodation and to the preservation of the books would permit."—[Preface to catalogue.]

A small sum is assessed on the students for the use of the library. All other persons are allowed to take out books without charge. The library is very much used for the purpose of consultation, not only by persons who are entitled to borrow books, but by others. The books have not suffered much by insects. The injury has been confined mostly to old books infested before they came to the library, and to some others which were kept in closed cabinets. The present officers are: librarian, Thaddeus William Harris, M. D.; assistant, Rev. John L. Sibley; temporary assistant, Mr. Ezra Abbot; janitor, Mr. Thomas Kiernan.

The *society libraries* connected with the college contain about 12,000 volumes.

Such deficiencies in contemporary literature as the students have at any time felt in using the public library, they have attempted to supply in their society libraries.

The oldest society of students of Harvard College is *The Institute of* 1770. It was formed in that year, as a debating club, with other literary purposes. Different clubs have since been joined to this society, and the library consists of the collections formed by them for their members from the current literature of the periods when they were purchased. Present library 2,500 volumes; annual increase about one hundred.

The Porcellian Club is a convivial and literary club of many years standing. Considerable annual additions from the periodical and other current literature are made to its library, which is the largest society library connected with the university, and contains a large number of valuable editions. At present it consists of about 5,000 volumes.

The Hasty Pudding Club—a social and literary organization founded in 1795—has a library which was established thirteen years afterwards. It now contains about 3,500 volumes. The annual increase is now about 300 volumes—the additions being made at present solely by the donations of the members. The intention of the library is to give to the members of the club those facilities for reference and relaxation which are ordinarily afforded by a gentleman's private library. It therefore consists of a selection from standard literature, in collecting which an especial design has been to embrace complete sets of the leading reviews, as well as the current literature of the day.

The Cambridge Alpha of the *Phi Beta Kappa* society is the oldest branch of that institution since the parent at Williams College expired. It was founded in 1781. For several years after that time a library of English standard literature was collected, which amounts to about 500 volumes. No additions have been made to it in recent years.

The *Natural History*, *Rumford*, and *Hermæan* societies—associations comparatively recently formed—have small, but increasing libraries. The Harvard Chapter of the *Alpha Delta Phi* society has a small library containing merely the books written by its graduate members, and a collection of periodicals. These may be set down together at 500 volumes.

The *Law Library* was commenced by the purchase of the valuable collection of Judge Story. It is in the building erected for the Law School. It contains about 14,000 volumes—having cost, excluding large donations, more than $35,000. "It includes all the American reports, and the statutes of the United States, as well as those of all the States, a regular series of all the English reports, including the Year Books, and also the English statutes, as well as the principal treatises in American and English law, besides a large collection of Scotch, French, German, Dutch, Spanish, Italian, and other foreign law, and a very ample collection of the best editions of the Roman or civil law, together with the works of the most celebrated commentators upon that law."—[Annual Catalogue, 1849–'50.]

"This library," (say the committee of overseers in their annual report for 1849,) "is one of the largest and most valuable relating to law to be found in the country. As an aid to study it cannot be estimated too highly. Here the student may range at will through all the demesnes of jurisprudence. Here he may acquire a knowledge of the books of his profession; learning their true character and value, which will be of incalculable service to him in his future labors. Whoso knows how to use a library, possesses the very keys of knowledge. Next to knowing the law, is knowing where the law is to be found."

The library is open for the use of students during the term, and those who desire it pursue their studies there, especially in the preparation of their moot-court cases.

Several catalogues of the library have been published; one (not, we believe, the first) was in 80 pages 8vo., 1833; a supplement (16 pages 8vo.) contained the books bequeathed to the library by Hon. Samuel Livermore, of Portsmouth, N. H. A general catalogue of the library was published in 1834, (228 pages 8vo.) This excellent catalogue, prepared by Charles Sumner, esq., is alphabetical, with a systematic index. The preface contains an interesting sketch of the history of the library. The fourth edition, with the additions, was printed in 1846, in 354 pages 8vo.

"The *Theological* library is in Divinity Hall. Persons entitled to its privileges must be connected with the Divinity School. Number of books about 3,000. They consist of valuable select works, principally in modern theology, with some of the early fathers in the original. Means have been recently devised to add to the library valuable modern works in theology and morals, as they are published.

"The *Medical* library is in the Medical College in Boston. It isp laced there for the convenience of students attending the medical lectures. The number of books is about 1,200. It contains all the elementary works which are the most important and the most used by students. Besides these, it has the writings of the early Greek and Latin medical fathers and the works of the later medical classics; and, with the latter, it contains numerous valuable modern works."

CAMBRIDGEPORT.

Parish Library—500 vols.—This library was founded in 1849. "One hundred volumes were given by a member of the society; nearly as many more, formerly belonging to the Sunday School Teachers' Library, have been transferred to this; the others have been purchased from the proceeds of the contributions at church." "Every family belonging to the society will be entitled to one volume at a time, which may be kept two weeks." A catalogue containing 8 pages 12mo. was printed in 1849. B. L. Whitney, librarian.

GROTON.

Library of Lawrence Academy—2,650 vols.—In 1827, at the recommendation of Mr. Elizur Wright, then the preceptor of the academy, the trustees commenced the formation of a library, by the purchase of eighty-six books. For ten years these, without any additions, were used by the students. They were the only ones ever purchased by the corporation. In 1838, Mr. Amos Lawrence, of Boston, made a donation of 186 volumes, and, up to the commencement of the year 1850, his successive gifts comprise 2,400 volumes—nearly the whole collection. Sixty volumes were presented by the American Tract Society; sixty-three were the relics of the library of a literary society formerly connected with the school; four were a gift from the corporation of Harvard College, through the kindness of President Sparks; a few were received from members of Congress. The library is "well selected, free from all corrupting and trashy literature, and adapted to form a taste for useful and solid reading." The library is open on Wednesday to the male pupils, and on Saturday to the females. A catalogue in 8vo., 206 pages, was printed at Lowell in 1850; it is alphabetical, with a classified index; it is in every respect a well executed work. From the preface, signed by James Means, the present preceptor, we have gathered the facts stated above.

LAWRENCE.

The Franklin Library—850 *vols.*—The Franklin Library Association was incorporated April 24, 1847, and possesses 850 volumes. A catalogue of the books (14 pages 12mo.) was printed in 1848. The library is opened on Tuesdays from 7 to 9 p. m., and on Saturdays from 12 m. to 1 p. m., from 4 to 5 and from 7 to 8 p. m. N. W. Harmon, librarian.

LOWELL.

City School Library—7,492 *vols.*—Founded in 1844. First opened for the delivery of books February 11, 1845. It contains 7,492 volumes. The first purchase consisted of 3,800 volumes. There have since been added from 1,000 to 1,500 volumes annually. The city drew from the State its proportion of a fund that had been accumulating for the purpose of forming school libraries, amounting to $1,215, and appropriated $2,000 to purchase this library. The next year the appropriation was $1,000, and since then it has been $500 yearly for the purchase of books. The library occupies a room 60 feet by 28, on the ground floor of a brick building belonging to the city, and centrally located. The books are arranged according to size, without regard to subjects, and each volume is numbered. The first catalogue (printed 1844) contains 66 pages 16mo. Four annual supplements have been printed, containing each 21 pages. The library is open every day, except Sunday, from 2 to 5 and from 7 to 9 p. m. Every citizen may take books out of the library, by giving satisfactory evidence that they will be carefully used, and by paying fifty cents annually. The number of subscribers is about 800, entitled to two volumes per week each. Josiah Hubbard, librarian.

Library of the Middlesex Mechanics' Association—5,386 *vols.*—Incorporated in 1825. Reading-room established 1834. The library contains 5,386 volumes. During the last ten years, the annual average expenditure for the purchase of books has been $314. In 1833–'34 the association erected a large building of brick, at an expense of $29,486 04, for all the purposes of the association. The library-room is 40 feet by 26, and 11 feet high. The reading-room is of the same size. A catalogue was printed in 1840, containing 136 pages 8vo. 89 pages are devoted to an alphabetical catalogue of the books, and 47 pages to a classified index; the large divisions of which are science, history, literature, government, and politics. Theology is included under science. Each division has several subdivisions. A supplement of 22 pages was printed in 1846. All members of the association, and other persons, citizens of Lowell, by paying an annual subscription of six dollars, are admitted to the privileges of the library and reading-room. The books are lent out. The library is open every day except Sunday from 2 till 5 o'clock p. m., and in the evening from 7 to 9. Strangers may be introduced by members to the use of library and reading-room. Mr. —— Crafts, librarian.

NANTUCKET.

The Athenæum Library—2,552 vols.—The Athenæum was founded in 1836. The library was destroyed by fire in July, 1846; refurnished and opened to the public in February, 1847; contained, in January, 1849, 2,532 volumes. It has small conchological and geological cabinets, a few maps, and several hundred coins of small value. 100 volumes were added in 1848. A wooden building was erected for the use of the institution in 1846–'47, containing a lecture-room, library-room, and museum—the cost, about $5,000. The library-room is 49 feet by 24, and 12 feet high. It is arranged in alcoves, and capable of holding 10,000 volumes. Opened daily from 1½ to 5 p. m., and on Saturday evenings from 6 to 9. Shareholders pay two dollars per annum, others three dollars per annum, for the use of the books. During the years 1847 and 1848, 5,230 books were taken out each year. William Mitchell, president.

NEWTON

Library of the Theological Seminary—6,000 vols.—Founded in 1825. Contains 6,000 volumes. All persons connected with the institution are entitled to the use of the library. The librarian has discretionary power in regard to lending books to other persons. A catalogue was published in 1833, in 12mo. The Seminary belongs to the Baptist denomination.

PLYMOUTH.

The Old Colony Pilgrim Society was formed 9th of November, 1819, for the purpose of commemorating the landing of the pilgrims upon the rock of Plymouth, of cherishing the memory of their virtues and sufferings, and of preserving such well authenticated relics as could then be gathered. In 1824 a monumental edifice was erected by the society. It is of unwrought split granite, 70 feet in length by 40 in width, and is two stories in height. It has a handsome Doric portico. The whole expense of the building and appurtenances was about $15,000. In the edifice a room is set apart for a library and a cabinet of curiosities. It has as yet but a small number of volumes. It has also some manuscripts relative to our early history. The cabinet contains a large number of curiosities of great interest. [See History of the Pilgrim Society, by W. Cogswell, in the American Quarterly Register for August, 1838, pp. 82–90.]

ROXBURY.

Athenæum Library—5,000 vols.—The Roxbury Athenæum was founded May 1, 1848. The library contains about 5,000 bound volumes, and about 4,000 pamphlets, and, say, 40 maps and charts, and 100 engravings. The first year, $1,500 were expended for the library; the second year, $600. There is a permanent fund of $4,000, yielding about $250 per annum. Many books have been received by donation. The library is open every day from 8 o'clock to 11 a. m., and from 3 to 5 p. m. The price of a share is twenty-five dollars. Annual subscribers pay four dollars. Three books may be taken out at a time by any proprietor or subscriber. Over 4,000 were taken out in 1849. A catalogue, 250 pages 8vo., was printed in 1849. Benjamin Kent, librarian.

SALEM.

The Athenæum Library—11,000 *vols.*—"The Salem Athenæum, incorporated in 1810, was formed by the union of the Social and Philosophical Libraries.

"In the year 1760, a number of gentlemen signed a covenant for the formation of a library in Salem, to be called the 'Social Library.' The number of shares at the commencement was thirty-two, at five guineas per share. This number was afterwards increased by the accession of new members. The library was first deposited in the brick school-house in School street, and there continued till 1786, when it was removed to the new middle school-house, now the centre school-house, in Washington street. The brick school-house was taken down to erect on or near its site the court-house; and this last building was also taken down in 1839 for the accommodation of the Eastern Railroad Company. The library was afterwards removed to the Central Building, Central street, where it continued till the union and the formation of the Athenæum.

"From the year 1775 to 1784, no meetings were held; and the interest which was before manifested in the success of the library was paralyzed by the unsettled state of the country during the Revolution. At the restoration of peace, the attention of the proprietors was again directed to the state of the library. All fines, forfeitures, &c., that had been incurred during the above-mentioned period, were cancelled, and it was determined to begin anew. A fresh impulse, thus imparted, rendered its further progress successful. In 1797 an act of incorporation was obtained. In 1809 a catalogue was printed.

"During the revolutionary war, the vessel on board of which a part of the library of the celebrated Dr. Richard Kirwan* was shipped for transportation across the Irish Channel was captured by an American privateer. These books were brought into Beverly and sold. A company of gentlemen, consisting of the Rev. M. Cutler, LL. D., of Hamilton; Rev. J. Willard, D. D., LL. D., and Joshua Fisher, M. D., of Beverly; Rev. T. Barnard, D. D., Rev J. Prince, LL. D., E. A. Holyoke, M. D., LL. D., and Dr. J. Orne, of Salem, &c., became the purchasers; and thus was laid the foundation of the 'Philosophical Library.' An offer of remuneration was afterwards made to Dr. Kirwan, who generously declined it, expressing his satisfaction that his valuable library had found so useful a destination. Rev. Joseph Willard was the librarian from the commencement till

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"*Dr. Kirwan, a chemical philosopher, was born in Ireland about the middle of the last century, and died in 1812. His principal works are, 'An Essay on the Constitution of Acids,' 'Elements of Mineralogy,' in two vols. 8vo., and a work on logic, published in 1809.—*Penny Cyclopædia, art. Kirwan.*"

his removal to Cambridge, in December, 1781, to enter upon the duties of president of Harvard University. The Rev. Dr. Prince was then appointed his successor, and continued in office till the union, in 1810. The late N. Bowditch, LL. D., when a young man, was enabled, through the kindness of the proprietors, to pursue his studies under very favorable auspices, by having free access to this library, which contained many important scientific books. In order to repay the debt of gratitude which he felt he had incurred, he left in his will, made fifty years afterwards, the sum of one thousand dollars for the use of the Salem Athenæum.

"At the formation of the Athenæum, the books were deposited in the rooms occupied by the Social Library. In April, 1815, they were removed to rooms in Essex Place. In 1825 they were again removed to the rooms over the Salem Bank; and finally, in the spring of 1841, to the present spacious hall in Lawrence Place, recently fitted for their reception. The present number of shares is ninety seven. Number of volumes in the library, 9,000. They have been principally obtained by the sale of shares, and by annual assessments "*

The library increases at an average rate of 250 volumes per annum. About $400 are annually appropriated for the purchase of books. There is a permanent fund for the increase of the library yielding about $150 a year. There have been several catalogues printed.

Catalogue of the Social Library,	1809	8vo.	42 pages.
Do do Salem Athenæum,	1811	8vo.	72 "
Do do do do	1818	8vo.	77 "
Do do do do	1826	8vo.	95 "
Do do do do	1842	8vo.	171 "
Supplement to the same	1849	8vo.	13 "

The catalogue of 1842, by Thomas Cole, esq., consists of two parts: the first, of 93 pages, contains the titles of the books, systematically arranged; the second (pp. 95—171) a list of about 1,600 pamphlets, inserted alphabetically under the names of their respective authors. A short account of each author, as far as could be ascertained, is affixed, noticing the year of his birth and death, the college or university at which he was graduated, the principal places of residence, occupation, &c. It is skillfully and accurately prepared.

The library is open every day, except Sundays, from 8 o'clock a. m. till sunset. Proprietors and their families, also settled clergymen of the city and neighboring towns, are entitled to the use of the books. Proprietors have the liberty to introduce strangers as readers. No record is kept of the number thus introduced. Charles J. Whipple, librarian.

The library at present contains about 11,000 volumes. The pamphlets, about 2,000 in number, forming a very valuable collection, are mostly bound in volumes. This is not only an excellent library for popular use, but it contains an unusually large proportion of works of standard value. Early theological and scientific works, and the transactions of learned societies, are more fully represented than in most libraries of this kind. The later additions have been well selected, and mostly in the departments of modern history, biography, voyages and travels, and general English literature.

Library of the Essex Institute—3,522 vols.—This society was incorporated in 1848, and formed by the union of the Essex Historical Society (incorporated in 1821) and the Essex County Natural History Society, (incorporated in 1836.) The library contains 2,522 volumes, 20 MSS., 25 maps, 30 paintings or engravings of the former presidents of the Historical Society, and some of the worthies of New England, a few coins, a good collection of objects of natural history, in the several departments of nature, a few Indian relics, &c. For the last ten years about 250 volumes and 350 pamphlets have been added annually, and principally by donation. For the same period about $100 per annum have been expended in the purchase of books. The room is accessible at all times to members of the society who may take out books. A considerable number of persons visit the library daily for the purpose of consulting the books. Henry M. Brooks, librarian.

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*See introductory remarks to the catalogue, 1842.

Library of the Mechanics' Institute—3,000 *vols.*

NOTE.—For the following additional information respecting public libraries in Salem we are indebted to Dr. Henry Wheatland, of that city:

The East India Marine Society has a library containing 300 volumes, some 20 or 30 of which are manuscript journals of sea voyages, &c. The museum belonging to this society is one of the most valuable and interesting in the country. Charles M. Endicott, president.

This society, whose membership is confined to those who have doubled Cape Horn and the Cape of Good Hope, as masters of vessels, was formed in 1799, and incorporated in 1801. A catalogue of the museum, &c., was printed in 1831, (178 pp. 8vo.)

The Essex Southern District Medical Society, formed in 1805, consists of those members of the Medical Society residing in Salem and the other towns in the southern section of the county. The library contains 1,000 volumes, and is located in the Lyceum Building. Dr. E. B. Peirson, librarian.

The Essex Agricultural Society, formed in 1818 under the auspices of the late Hon. T. Pickering, its first president, has within a few months past purchased the agricultural library of the late Henry Colman, containing 525 volumes. These, with a few volumes previously in its possession, will make the library contain 650 volumes. It is deposited in a room in the City Hall, Salem. John W. Proctor, of Danvers, president.

The Salem Evangelical Library, founded in 1818, contains 1,400 volumes. Rev. B. Emerson, D. D., librarian.

Besides these, three religious societies possess libraries containing together 2,500 volumes; the public school libraries contain 3,600 volumes; the Sabbath school libraries 8,000 volumes—making an aggregate, including the Athenæum, the Mechanics' Library, and the library of the Essex Institute, of 31,192 volumes in the public libraries of the city.

WILLIAMSTOWN.

Williams College Libraries—10,559 *vols.*—The college library was founded contemporaneously with the college in 1793, and contains at present 5,993 volumes, the charts of the United States coast survey, and a very few coins. The yearly average increase for the last ten years has been 188 volumes. Yearly expenditure, $190. A brick building was erected for the accommodation of the library, by Hon. Amos Lawrence, of

Boston, in 1847, at a cost of $7,000. It is called Lawrence Hall. In form it is a regular octagon, each side 19 feet, and is found to be very convenient. A catalogue, 51 pages 8vo, was printed in 1845. The first was printed in 1794, others in 1812 and 1828. The library is opened one hour every Wednesday and Saturday during term time. The students of the two lower classes pay 40 cents each, per term, for the use of books; those of the two upper classes pay 50 cents each. Books are lent out to clergymen and other literary gentlemen, even at a distance from the college, at the discretion of the librarian. About 800 are taken out annually. Prof. John Tatlock, librarian.

Besides the college library, are the libraries of two societies of undergraduates of the college:

The Philologian Society Library - - -	2,416 vols.
Philotechnian Society Library - - - -	2,150 "

As the building erected for the library of this college is one of the few, in the planning of which the *internal conveniences* have been primarily consulted, it may not be amiss to give in this place a somewhat minute description of it.

It was required to erect a building for a library of 6,000 volumes, capable of *accommodating* 30,000, and of being extended so as to hold 50,000, or more, without interfering with the part first built. The edifice was to be of brick, substantial and tasteful, and not to cost more than $7,000. These, it must be confessed, are somewhat difficult conditions to meet.

The building is in form a regular octagon, each side 19 feet, the whole height 40 feet. The elevation presents a principal story of the Ionic order, with arched windows, one on each side, and plain pilasters. There is a rusticated basement 13 feet in height. The entrance is by a single door in one face of the octagon. This door opens upon a vestibule, from which rises a circular staircase conducting to the library story, and intended, when the increase of the library may demand it, to be carried up to the galleries. Leaving, for the present, the basement, we will notice the principal story. This is occupied as the library. It is lighted from the sides and the top; is cheerful, airy, and elegant. In the centre is a circular colonade of 8 Ionic pillars, from which springs a dome, surmounted by a lantern. The cases for the books are to be placed against the walls, and radiating from the columns to the corners of the octagon, thus dividing the room into 8 alcoves and a circular area in the centre. One of these alcoves contains a circular staircase. The shelves at first built are only 7 feet high, and will contain say 10,000 volumes. When more shelves are required, a light iron gallery is to be laid upon the top of the cases, and another set of shelves, also 7 feet in height, is to be placed upon the first. This gallery is reached by a continuation of the circular staircase, one staircase being sufficient for so compact a library. The room will admit three such tiers of shelves. Thus the apartment will hold 30,000 volumes; all of which may be reached without the use of movable ladders. The librarian's desk is in the centre; from it he can see, by simply turning round, every person and every book in the room.

The basement is divided into rooms corresponding in shape to the alcoves of the library. One of these divisions and the central area form together a lobby communicating with the several rooms. Another of the divisions is occupied by the stairs. Two others form a room for the meetings of the trustees and for a reading-room of periodicals. The division of the octagon directly behind the stairs, serves as an entrance to the cellar and as a lumber-room. The first room on the left of the lobby is the "packing-room," into which all boxes of books are to be first brought, to be unpacked and examined. All books to be bound, or to be sent away for any purpose, should be invoiced and packed here. A dumb-waiter communicates with the library above. Next to the packing room, and opening into it, is the librarian's room; next to that a room for engravings, manuscripts, and other articles which require to be kept apart from the principal collection and guarded with special care.

WORCESTER.

Library of the American Antiquarian Society - 18,000 *vols* —The American Antiquarian Society was incorporated October 24, 1812. The present number of volumes in the library somewhat exceeds 18,000. Its manuscripts, though of much interest to the student of New England history, cannot readily be enumerated. Many maps, charts, engravings, medals, &c., belong to the collection. The average annual increase, for the last ten years, has been 404 books and 1,048 pamphlets. The accessions to the library are chiefly donations. There is no fund solely for the purchase of books, and no regular appropriation. The general funds of the society amount to $30,038 33. About $200 were expended in 1848. A brick building was erected in 1820 at a cost of about $10,000. It consists of a central edifice 50 by 40 feet, and two stories high, with wings each 28 by 20 feet, also two stories high. The only catalogue which has been published was printed in 1837, and contains 582 pages royal 8vo. The regular hours for keeping the library open are from 9 a. m. to 1 p. m., and from 2 to 5 p. m.; Saturday afternoons excepted. The library is free to the public for use on the premises. But books are not lent out, except that, by a special act of the council in each case, permission may be had to take books from the town, a bond being given for their safe return. It is impossible to say how many persons consult the library annually. The number is very large. Samuel F. Haven, librarian.

The preface to the catalogue contains the following sketch of the history of this library, which, from its public interest, we insert in full:

The library of the American Antiquarian Society owes its origin to the sound judgment and sagacious foresight, not less than to the public spirit and zeal for the diffusion of knowledge, which marked the character of Isaiah Thomas, the venerable founder of the institution. The important contributions made by Dr. Thomas, both as an author and a printer, to the cause of good learning, need not here be repeated; they already form a part of our public history. From his press much of the early literature of the country was supplied, and to his pen was it occasionally indebted for suggestions and illustrations, in the form of notes, prefaces and appendices, giving increased value to the publications which issued under his auspices. His "History of Printing," written after his retirement from business, was the fruit of his past industry and research, and is a standard work on the shelves of our principal libraries.

During his active period of life, while engaged in the publication of books, to an extent which kept nearly twenty presses in constant operation, and at the same time in conducting a magazine and newspaper of wide circulation, Mr. Thomas necessarily collected many books, pamphlets, and papers, which already constituted a library of considerable magnitude. To this he subsequently made additions with a view to the preparation of his History. After the publication of that work, he justly considered the library which he had been gradually gathering, as a treasure of too much value to society to be hoarded in private while he lived, and perhaps scattered to the four winds at his decease. He was led by this consideration to propose an association for collecting and preserving the materials of history, to whose charge he might intrust his literary treasures, for the use of the present and future generations, and with the fond expectation that they would be the embryo of a collection hereafter to rival the famous libraries of Europe. His design was submitted to his friends, with whose advice and assistance he matured a plan of organization for the American Antiquarian Society, and procured an act of incorporation October 24, 1812. He was elected the first president, and continued in that office till his decease, April 4, 1831, at the age of 82.

Immediately after the incorporation of the society, Mr. Thomas bestowed upon it his library, then composed of about 3,000 bound volumes, a great number of pamphlets, and a series of newspapers far more complete than any other existing in America. Soon afterwards a donation of 900 volumes was received through the hands of Mrs. Hannah Crocker, a descendant of the Mather family, (in part a gift from herself, and partly a purchase by Mr. Thomas,) being the remains of the library formerly belonging to Increase and Cotton Mather, the most ancient in Massachusetts, if not in the United States. A valuable addition was also made to the library and cabinet by the legacy of Rev. William Bentley, D. D., of Salem. The books bequeathed by Dr. Bentley amounted to several hundred volumes, principally German editions and in the German tongue, besides a collection of oriental manuscripts, including a splendid illuminated copy of the Koran, and several commentaries thereon.

Our munificent founder continued to cherish the child of his old age with truly parental assiduity. Every year he made liberal donations of books and rare curiosities, some of which were procured by him at considerable expense. The whole amount of his donations in books was between 7,000 and 8,000 bound volumes, a large number of unbound tracts, and the greater proportion of all the newspapers now belonging to the society. He was at the charge of printing the first volume of Transactions, published in 1820. In the same year he erected the edifice now occupied by the society, and gave it for their exclusive use. And to crown his benefactions and place the existence and usefulness of the institution beyond the reach of ordinary vicissitude, he endowed it, at his decease, with a fund, which, if not equal to all its wants, is ample compared with many other institutions, and will probably enable it hereafter to do good service in the republic of letters.

There are many other benefactors of the society entitled to their gratitude, among whom it may be permitted to the committee charged with the publication of the catalogue to name the Hon. Thomas L. Winthrop, our present president, whose solicitude for the interests of the institution has been unceasing, and who has enriched the library with many volumes of great price and rarity. Mr. Thomas Wallcut, of Boston, has been the donor of a large collection of old books and pamphlets, especially suited to the objects and taste of the antiquary. The names of all donors, even of a single volume or tract, or any article of curiosity, are entered on our records, and will be transmitted, on the list of our patrons, to those who may come after us.

Soon after the incorporation of the society, the national government made provision for supplying us with copies of the public laws and documents. The legislatures of several of the States have generously made a similar provision. The government of Massachusetts furnishes two sets of all the publications ordered by the legislature, including the statutes and judicial reports. These documents compose a valuable portion of our library; and should the example be imitated by the other States of the Union, a collection of public documents would soon be formed, whose importance to the statesman and the historian cannot be too highly estimated.

The present [1837] number of bound volumes in the library is about 12,000, including upwards of 1,200 volumes of pamphlets, and more than 700 bound volumes of newspapers. There are about 500 pamphlets yet unbound, exclusive of duplicates, and nearly 1,000 volumes of unbound newspapers. Nearly all the American papers printed before the Revolution are in this collection, and of some of them a more complete series is here to be found than is anywhere else in existence.

The manuscripts of the society are of considerable value, especially that portion of them which relates to the early ecclesiastical history of New England. They embrace many of the papers of the Mathers—Richard, Increase, Cotton, and Samuel; those of John Cotton, minister of the first church in Boston, and of John Cotton, the second, minister of Plymouth. There are many other manuscripts which have already been consulted with advantage by authors, and others who have had occasion to investigate the venerable records of the past. The lapse of years will add to their importance; and those time-defaced pages, which are now merely glanced at as objects of curiosity, will hereafter be studied with an intense and eager interest.

The cabinet of the society is not yet of great extent. The articles of most interest are those illustrating the manners of our fathers, and the weapons of war, articles of apparel, and domestic utensils of the aborigines of North America. Specimens of this kind, of American origin, are more to be desired by an American Society of Antiquaries, than any articles, however rare or antique, brought hither from the ransacked domains of the Old World. The cabinet contains a collection of coins, comparatively small, but amounting to nearly 2,000 pieces, of which, however, many are duplicates. Among them is a considerable number of coins of the Roman Empire, and a few said to be of still more remote antiquity. It is believed there are specimens of nearly all the pieces of money ever struck in the present United States.

The library and cabinet of the institution are deposited in a building, in the construction and occupation of which great precaution has been taken for the security of the treasures accumulated within its walls.

The second volume of "Archæologia Americana" has lately issued from the press. The long delay which took place between the appearance of the first and of the second volume is to be imputed, not to the want of materials for the publication, or inclination to spread them before the public, but to the want of sufficient funds, which have but recently come into the possession of the society.

The foregoing sketch of the origin of the society, its objects, history, and present condition, it is hoped by the committee will not be deemed an unsuitable introduction to this volume.

A catalogue of the library has long been a desideratum, not only to the members of the society, but to all who sought access to their archives. Without such an index, a great portion of our volumes were no better than sealed books to every inquirer who had not time or patience to seek, among the undigested mass, for such dates and facts as he desired to ascertain. The catalogue now published is almost wholly the work of the late lamented librarian, Christopher C. Baldwin, whose decease the society deplores as an irreparable loss. It was prepared by him with great care and labor, and is a monument of his untiring industry. It has been completed and brought up to the present date, by the acting librarian, Maturin L. Fisher, esq. Its accuracy, as far at least as regards the bound books, has been since subjected to the test of a careful comparison of its titles with the correspondent volumes on the shelves of the library. It is in the alphabetical form, which has been generally adopted by librarians, as more simple in its arrangement and more convenient for reference, than a systematic index. The plan pursued was to give the name of the author when known, and where the work is anonymous, briefly to state the subject. Each letter of the alphabet has been paged by itself, to facilitate the insertion of future additions under the respective letters, and thus render a new edition of the whole catalogue unnecessary, at least for several years. Our list of books, it will be observed, contains an unusual proportion of tracts, for which reason it is swollen to a size somewhat disproportionate to the solid contents of the library. But we prize this large collection of pamphlets, as a most important part of those materials for history which it is the great object of the society to preserve; and if the list was confined to these alone, we should judge it of sufficient consequence to warrant a publication.

A written catalogue of manuscripts, very minute in its titles and details, is now in a course of preparation, and will be kept in the library for the inspection of all who may have occasion to consult it.

By order of the Council:
JOHN PARK.

The catalogue of this invaluable collection will ere long be reprinted, with the additions since the time of the first printing. Prepared by the present learned and able librarian, it will be a very important contribution to the means of investigating the early history of New England. This society has taken measures to commence the project of stereotyping by titles, so that each library in the country, while it secures a permanent catalogue of its own treasures, will help form the general printed and stereotyped catalogue of all the libraries. This plan, proposed some years ago at the Smithsonian Institution, has received a new impulse through the favor and support which has been accorded it by the Antiquarian Society.

I am indebted to Mr. Haven for the following additional particulars respecting this library:

"A prominent feature in the collection is the *Mather Library*, consisting of about 1,000 volumes, and containing probably the greater portion of the books owned by Increase and Cotton Mather, as well as those of Richard, the father of Increase. The first two were emphatically *the scholars* of their day, in New England; and the works they collected fairly represent the literature and learning of their time, whether historical, theological, or metaphysical, or relating to the natural sciences. This is perhaps the oldest private library in the country that has been transmitted from one generation to another. It was obtained from Mrs. Hannah Mather Crocker, grand-daughter of Cotton Mather, and only remaining representative of the family in Boston—partly by gift and partly by purchase. It is called in the records 'The remains of the ancient library of the Mathers,' and was considered by Isaiah Thomas as 'the oldest library in New England, if not in the United States.' With these books was obtained a large collection of tracts and manuscripts belonging to the Mathers: the latter consisting of sermons, diaries, correspondence, and common-places. Many of the tracts are political, and relate to the period of the Revolution and the Commonwealth in England. Taken together, this Mather collection is unique, and of great historical value.

"The *pamphlets* form another prominent and somewhat peculiar feature. They undoubtedly contain a greater number and variety of fugitive publications, such as illustrate the character and spirit of the time, than can be found elsewhere in the country. Those of ancient date are numerous and curious.

"The *newspapers* begin with the first number of the first paper printed in the United States; and, though the series is not perfect, it is, taking the whole period together, the most perfect that has been preserved. The collection of *almanacs* is, also, the most complete and curious that can probably be found in the country. The *manuscripts* are chiefly such as illustrate New England history. Many are theological; some are treatises and commentaries that have not been printed. There are many letters written by or addressed to the original settlers and their immediate descendants. There are a few diaries, and an untold quantity of manuscript sermons. Besides those of an older period, a mass of military papers relating to the American Revolution belong to the society, which, at the request of the State government, have been deposited in the State House at Boston.

"As to *paintings* and *engravings*, besides the family portraits of the Mathers, five in number, the society possesses an original portrait of Winthrop (received from the late William Winthrop, of Cambridge,) together with the 'stone pot, tipped and covered with a silver lydd,' containing the genealogy of the direct line in which that heir-loom, the pot, had descended. This stone pot is referred to in Savage's edition of Winthrop's journal. We have also portrait of Endicott, Higginson, John Rogers, the martyr; Governors Burnett and Leverett; Hannah Adams; our late presidents, Isaiah Thomas and Thomas L. Winthrop; Mr. Baldwin, late librarian; Charles Paxton, by Copley; Judge Chandler, &c.; and a very considerable collection of engraved heads in frames, bequeathed by the late Dr. Bentley, of Salem.

"There are also many curious and rare old *maps* and *charts*."

Library of the College of the Holy Cross—4,220 *vols.*—Founded in 1843; contains about 4,000 volumes, besides many maps, charts, engravings and pieces of music, and 650 coins and medals. It is opened every day. The professors of the college, and such of the students as have special leave from the president, are entitled to the use of the books. Books are occasionally lent out to persons at a distance from the college. J. O'Callaghan, librarian.

A society of students possesses a library of 220 volumes.

The Library of the Mechanics' Institute contains over 1,000 volumes, nearly all of them choice scientific works recently selected. About $300 per annum are now applied to the increase of the library.

The Lyceum Library contains 1,300 volumes, selected with care. The sum expended for books last year was $100, which is perhaps about the average annual amount.

The Library of the Manual Labor High School, established by the Baptists in 1832, contains about 500 volumes.

PUBLIC SCHOOL LIBRARIES IN MASSACHUSETTS.

From the twelfth report of the secretary of the board of education, presented November, 1848, we learn that the number of volumes in the school libraries was 91,539, and their estimated value $42,707. "It would be difficult," adds the secretary, "to mention any way in which a million of dollars could be more beneficially expended than in supplying the requisite apparatus and libraries for our common schools."

There are sixty-seven incorporated *academies* in the State, many of which possess libraries. Some few of these have already been noticed.

Most of the religious societies possess also *Sunday school libraries.* The number of volumes it is difficult to estimate. It must, however, be very large. These books exert a powerful influence in literature no less than in religion and morals.

Social libraries exist in about two-thirds of the towns in the State. Some of these have been noticed, but only a small part of all that exist. It will be a work of time to gather exact information respecting the whole of them.

By chapter 52, statutes of 1848, the State legislature authorizes the *city of Boston to establish a public library,* and to expend $5,000 a year for its support. Mr. Bigelow, the present mayor of the city, has presented $1,000. Hon. Edward Everett has given a valuable collection of public documents, comprising more than 1,000 volumes. Many books have also been received from Mr. Vattemare. Mr. Winthrop, present Senator from this State, has also presented the documents of the general government for about ten years.

RHODE ISLAND.

NEWPORT.

Redwood Library—4,000 vols.—A catalogue (95 pages 8vo.) of this library was published in 1843.* The preface contains the following historical sketch of this venerable institution, which has been thought to possess sufficient general interest to warrant its publication, with some omissions, in this place:

"The Redwood Library and Athenæum owes its origin to a literary and philosophical society, which was established in Newport in the year 1730. This society was composed of some of the most respectable men of the town of Newport, at that period one of the most remarkable in the

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* A catalogue had also been printed in 1764, in octavo.

American colonies, for its wealth, learning, and public spirit. Its origin is connected with a splendid name in literature and philosophy. The celebrated Bishop Berkeley, who resided at this time on Rhode Island, encouraged the formation of this institution, and participated in its discussions. He was the intimate friend of some of its members; and the charm of his conversation, undoubtedly, gave a delightful interest to its meetings. Berkeley resided on Rhode Island from January, 1729, to September, 1731; and from frequent intercourse with these vigorous-minded men, derived that knowledge of American character which prompted his muse to utter the prophetic declaration, 'Westward the star of empire takes its way.'

"At that period, the advantages of the association depended on a system of weekly debates and conversations upon questions of utility or interest. The formation of a library was, subsequently, considered by them as one of the most powerful means of accomplishing their original purpose, 'the promotion of knowledge and virtue.' The system of debates was gradually laid aside, and the energies of the society were solely directed to the collection of valuable books. Had the establishment of a library constituted, originally, an object of the society, the valuable books given by Bishop Berkeley to Yale College and Harvard University, on his departure from Newport, in 1731, would undoubtedly have been presented by him to this institution, to individual members of which he was strongly attached.

"In the accomplishment of this new object, a great impulse was given by Abraham Redwood, esq., who, in 1747, placed at the disposal of the society £500 sterling, for the purchase of standard books in London. To give permanence and usefulness to his donation, Mr. Redwood enjoined on the society the duty of erecting an edifice as a depository for such books as might be purchased. In pursuance of their object, a charter of incorporation was obtained in 1747, and the society, in honor of their most liberal benefactor, asumed the name of the Redwood Library Company. For the erection of a library building, five thousand pounds were almost immediately subscribed by different citizens of the town. Heny Collins,* esq., proved a noble coadjutor of Mr. Redwood, and presented, in June, 1748, to the company, the lot of land then called Bowling Green, on which the present library edifice now stands.

"The library building, which is a beautiful specimen of the Doric order, was commenced in 1748 and completed in 1750. The plan was furnished by Joseph Harrison,† esq., assistant architect of Blenheim House, England. He also superintended the erection of the edifice, with the committee of the company, consisting of Samuel Wickham, Henry Collins, and John Tillinghast. The master-builders were, Wing Spooner, Samuel Green, Thomas Melville and Israel Chapman. The principal front is ornamented with a portico of four Doric columns, seventeen feet in height, and projecting nine feet from the walls of the building.

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[*] "Henry Collins was a merchant of Newport, distinguished for his wealth, liberality and taste. He employed Smibert, who came out with Dean Berkeley, to take the portraits of Callender, Clap, Hitchcock, and Berkeley. Smibert was an excellent artist, and had been previously patronized, while at Florence, by the Grand Duke of Tuscany. The portrait of Henry Collins, taken by Smibert, is supposed to be in the possession of some branch of the Flagg family; but the proprietors of the library have not, as yet, been enabled to obtain it."

[†] "Harrison was architect of the beautiful little Episcopal church in Cambridge."

The edifice consists of a main building, and two small wings* on each side, ranging in a line parallel with the west end of the building. The wings furnish two rooms, of about twelve feet square. The principal library room, occupying the whole of the main building, is thirty-seven feet long, twenty six feet broad, and nineteen feet in height. The edifice is lighted by seven whole windows and three attic windows in the east and west ends."

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"The library building, on the outside, is worked in imitation of rustic, and is adorned by the ornaments appropriate to the Doric order. The whole building is supported by a substantial foundation, raised several feet from the ground.

"The first meeting of the Redwood Library Company, after their incorporation, was held in the Council Chamber, in Newport, on the last Wednesday of September, 1747."

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"At a meeting of the company in the Council Chamber, on the 4th of July, 1748, the directors presented a catalogue of the books which they proposed to purchase in London. The liberal share given in this catalogue to the ancient classics, evinced a disposition to provide for the scholar the objects of his favorite study. In these times of customary appeal to direct utility, we fear a less liberal expenditure would be allowed for the gratification of classical taste. This catalogue, with Mr. Redwood's bills of exchange, was sent immediately to Mr. John Thomlinson, esq., of London, who appears to have satisfactorily executed the commission of the society. He was elected an honorary member in 1749."

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"In 1750 a tax of twelve hundred pounds was assessed on the members of the company, to defray the expense of completing the building.

"In 1755 the Rev. Ezra Stiles was admitted an honorary member of the society. His distinction as a scholar and theologian, connected with his exertions in behalf of the library, justifies some allusion to his character, in an historical sketch of the institution. The Redwood Library, at the time of his settlement in Newport, contained about 1,500 volumes of standard books. The classical and theological departments were the most valuable, and constituted the principal attraction, which determined Dr. Stiles to fix his residence in Newport. He remained in Newport twenty years, and during the greater portion of the time officiated as librarian of the company. Having constant access to this valuable collection of books, he drew from it, by assiduous study, his great and various learning. He held an extensive correspondence with European scholars, and the principal object of that correspondence was to illustrate and perfect those researches and investigations in philosophy, history, antiquities and physical science, to which his mind had been prompted by the perusal of books which he found on our shelves. His zeal for the diffusion of knowledge led him to solicit for the library valuable works from European authors. Many of these works, obtained through his instrumentality, are still preserved in the library. The copy of Montanus' Hebrew

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* These wings were not in the original design. They deface rather than adorn the edifice.

Bible and Dictionary, now belonging to the library, enabled him to perfect his knowledge of the Hebrew language; and a folio copy of Homer still bears the marks of his profound study, in the form of Greek annotations, in his own handwriting. He was one of the most eloquent advocates of liberty in the colonies, before the Revolution. The late Dr. Channing says of him: 'To the influence of this distinguished man, in the circle in which I was brought up, I may owe in part the indignation which I feel towards every invasion of human rights. In my earliest years I regarded no human being with equal reverence.' His rare learning, eloquence, and goodness, uniformly supported by tradition, have received, of late, the attestation of great names. The eloquent eulogy pronounced upon this gifted and extraordinary man, by Chancellor Kent, will preserve for many generations the memory of his attainments, genius and virtue.

"In 1770 the proprietors, to evince their grateful sense of Mr. Redwood's exertions for the advancement of the institution, requested him to sit for his picture, the expense of which was to be defrayed from the company's treasury. After repeated solicitations, in 1773 Mr. Redwood gave his consent, agreeably to the wishes of the company. David Cheeseborough, Thomas Vernon, and John Bours, esqs., were appointed a committee to carry the vote of the society into execution. This painting was probably executed, but it is doubtful whether it was ever placed in the library. The beautiful portrait which at the present time adorns the walls of the library room was copied by Charles B. King, esq., from an original portrait of Mr. Redwood, and was generously presented by him to the society, in 1817.

"No meetings of the Library Company were held from 1778 to 1785. During the Revolution, the town of Newport was occupied by various armies. The disastrous state of the town compelled many of the best citizens* to leave their homes, and to seek shelter for themselves and families in the more secure retreats of the country. The tumults of war and revolution interrupted the peaceful pursuits of literature, and exerted a chilling influence on the growth of knowledge, and the prosperity of institutions like that which forms the subject of our sketch. During the war, the library building is said to have been defaced, and many of the books carried off. To the honor of Gen. Prescott, it is said that on being informed of the exposed state of the library, he stationed a military guard to protect it from further injury and depredation.

"At a meeting of the company, held at Mr. Townsend's hotel, on the 14th of October, 1785—it being the first meeting after the conclusion of the war of the Revolution—the following gentlemen were chosen officers of the institution: Hon. Abraham Redwood, Stephen Ayrault, William Vernon, John Malbone, Jonathan Easton, Nicholas P. Tillinghast, Jacob Richardson, and Robert Stevens, *Directors;* William Channing, *Secretary;* Christopher Ellery, *Librarian;* Stephen Ayrault, *Treasurer.* Several important objects engaged the attention of the society: the principal were the remission of the annual tax from 1778 to 1785, the repair of the library edifice, the recovery of missing books, and the formation of a catalogue of the library. William Vernon, Henry Marchant, and William Channing, esqs., were appointed to apply to the honorable General

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* "Mr. Redwood resided, during the revolutionary war, on his farm in Mendon, Mass."

Assembly, at their next session, for a renewal of the charter of the company, with alterations and amendments.

"The society experienced a great misfortune in the death of Mr. Redwood, the founder of the library, March 6, 1788. Beneficent objects seemed to have occupied the mind of Mr. Redwood, as will appear from the following obituary notice, taken from the Newport Herald, March 13, 1788: 'Last Saturday morning died the Hon. Abraham Redwood, in the 79th year of his age. He was blessed with an ample fortune and a liberal spirit, which prompted him to encourage useful learning and relieve the distresses of mankind. He founded the library in this town. He subscribed largely to a college to be built in this State, on condition that it should be established in the county of Newport. He subscribed £500 sterling towards a university proposed to be erected in this town; and he offered the same sum to the Society of Friends, of which he was a member, to endow a school in this place for the instruction of Friends' children. His less public acts of generosity will be gratefully remembered by those on whom they were conferred; and the poor will never forget that Abraham Redwood was their constant friend and benefactor.' It is understood that Mr. Redwood removed to Newport from Antigua, where he possessed large and valuable estates.

"After his death, the public interest in the prosperity of the institution seems to have declined. A period of great success in the commerce of the town was allowed to pass away without bringing new resources for the accomplishment of the objects of the institution. In fact, its very existence, at one time, depended on the resolution and efforts of a few individuals. The late Dr. Channing, in a discourse delivered in Newport in 1836, alludes to the neglected condition of the library at this period, during which he pursued his studies in this town. He says: 'I had no professor or teacher to guide me, but I had two noble places of study. One was yonder beautiful edifice, now so frequented and so useful as a public library; then so deserted, that I spent day after day, and sometimes week after week, amidst its dusty volumes, without interruption from a single visitor.'

"The public attention was not directed to the importance of the institution till the year 1810, when the society received an accession of spirit and ability by the admission of a large number of new proprietors. In March, 1810, James Ogilvie, esq., visited the town, and delivered several lectures on the advantages of public libraries, which contributed essentially to awaken the public to the claims of the Redwood Library on their generosity and support. He made the society a liberal donation of select and valuable books. From 1810 to the present time, a very respectable interest has been maintained in the institution, and the funds placed at the disposal of the society have been judiciously managed in accomplishing the plans of its founders."

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"The exertions of the late Robert Johnston, esq., in behalf of the institution, demand honorable mention. By his solicitation, some of the most rare and valuable works in the library were obtained from different individuals in Newport and its neighborhood. In 1834 he made great efforts to enrich the library with the public records of England. He succeeded in obtaining eighty-four volumes (seventy-two large folios and twelve octavos) from the Lords Commissioners and Lord Lyndhurst, in consequence of his application to them, through the medium of his friend and agent, Thomas Bland, esq., of London. These volumes, containing the most valuable materials of English history, were understood to be obtained as a present from the King of Great Britain, on the application of Lord Lyndhurst. As such they will be perpetually preserved in the Redwood Library.

"In 1813 Solomon Southwick, esq., of Albany, gave to the library one hundred and twenty acres of land, in the State of New York, for the purpose of advancing the institution, and thereby perpetuating the memory of Henry Collins, esq., one of its principal founders.

"In 1834 Abraham Redwood, esq., of Dorset Place, Marylebone, England, being desirous of promoting an institution founded by his honored grandfather, gave to the company the homestead estate, situated in Newport, which he inherited from his father, Jonas Redwood, esq.

"In 1837, Baron Hottinguer, a distinguished banker of Paris, who was connected by marriage with the Redwood family, presented to the company one thousand francs, for the restoration of the building.

"In 1840, the Hon. Christopher G. Champlin bequeathed to the company one hundred dollars and some valuable books.

The proprietors are also indebted to the Hon. William C. Gibbs, for his liberality in permitting a free access to a valuable collection of books, at present deposited by him in the library.

"The library room is adorned by several paintings and busts. The beautiful bust of John Marshall was presented in 1839, by Augustus E. Silliman, esq., of New York. The acknowledgments of the company are due to Charles B. King, esq., of Washington, for his numerous and valuable donations; among which are the portrait of Columbus and that of Abraham Redwood, the founder of the library."

The Mechanics' Library—1,100 *vols.*—The Newport Association of Mechanics and Manufacturers was incorporated in 1792. The library was founded in 1828. The average expenditure for books during the last ten years has been about $50 per annum; the average increase of the library from 30 to 60 volumes. As the society has rapidly increased of late, the library will hereafter be an object of special attention. There is a fund of $1,200 belonging to the association, the income of which is applied to various other objects besides the library, which is principally supported by a tax on the members. It is contemplated to erect, so soon as circumstances will allow, a building for public lectures and the library. There is a printed catalogue, but it is very incomplete. Another will be published in the course of the next year. The library is open every Wednesday and Saturday evening from 6 till 9 o'clock. All members of the association, and the apprentices of members who have written orders from their employers, are allowed to take out books. About 1,500 volumes are thus lent each year. W. Nichols, secretary.

PROVIDENCE.

Brown University Libraries—31,600 *vols.*—Brown University was incorporated in the year 1764. It was originally established in the town of Warren, where, in the year 1769, the first commencement was celebrated. It was subsequently removed to Providence, where the first college edifice (University Hall) was erected, in the year 1770.

At the period of its removal to Providence, the college appears to have been destitute of a library, or at least of any collection of books worthy of the name. To supply, as far as possible, this deficiency, the Providence Library Company (now merged in the Providence Athenæum) tendered the free use of its books to the officers and students of the college—a privilege which was continued several years.

The books first obtained for the library were probably procured in England, through the agency of the Rev. Morgan Edwards. In the year 1768 Mr. Edwards, then in England, was authorized by the corporation "to purchase such books as he shall think necessary at this time, not exceeding 20 pounds value." This is the only appropriation, small as it is, which is recorded previously to 1784! It is probable, however, that Mr. Edwards and the other agents of the college, while soliciting money, received many presents in books; for, in 1776 the college was in possession of a library, which, at the commencement of hostilities in that year, was removed to the country for safe keeping.

The college was disbanded December 6, 1776, immediately after the British troops took possession of Newport. From December 7, 1776, to June, 1782, the college building (now University Hall) was occupied, first as a barrack for the American militia, and afterwards as a hospital for the French army, commanded by Count Rochambeau. On the return of peace the college edifice was purified and refitted, the library was brought back, and the business of instruction resumed.

In a letter concerning the early history of the library, the Hon. Asher Robbins writes: "At the reorganization of the college, in the autumn of 1782, I was appointed to the office of tutor, and took charge of the library as librarian. It was then kept in the east chamber on the second floor of the central building; the volumes it contained were quite limited in number—these mostly the primary editions of the works in folio and quarto. The precise number I am not able to recollect; my impression is that it did not exceed two or three hundred. Of the previous history of the library I have no certain knowledge; I believe, however, it was acquired by purchase, through the agency of the Rev. Morgan Edwards, and that it was imported, after the removal of the college from Warren and the erection of the college edifice in Providence.

"An addition was made to the library soon after my connexion with it. At a meeting of the corporation, it was proposed by Mr. John Brown to raise a fund, by subscription, for the purchase of books. To encourage a liberal subscription he told the corporation to subscribe what they would, and to procure what they could by subscription elsewhere, and that whatever the amount was, he would subscribe an equal sum. He did so; and, besides, made good the subscriptions of those who failed to pay up theirs. I was employed to make out the invoice of the books to be purchased, under the advisement of President Manning, and also, I think, of the chancellor, Governor Hopkins, who, by the-by, was a very competent adviser on this subject, being deeply versed in English literature, and an excellent judge of its various merits. The importation was in the course of that year (1783) made by Mr. Nicholas Brown [brother of Mr. John Brown]."

In the year 1784 a valuable donation, containing the works of several of the Fathers of the church, was received from the Bristol Education Society in England.

In the same year (1784) the corporation appropriated the sum of £350 for the purchase of books.

In the succeeding year, Granville Sharp, esq., presented several of his own publications, with a set of the works of his grandfather, Dr. John Sharp, Archbishop of York. He subsequently sent other valuable presents to the library. In 1787, the thanks of the corporation were presented to Mr. John Francis (son-in-law of John Brown and father of J. B. Francis, late Governor of Rhode Island) for a valuable donation of books.

In the year 1792 Nicholas Brown, then a recent graduate of the institution, and a young and enterprising merchant, commenced his benefactions towards the college by the gift of a law library, containing about three hundred and fifty volumes of valuable books, which he had imported from England for that purpose.

The Rev. Isaac Backus, of Middleborough, Mass., author of the Church History of New England, who died in 1806, in the 83d year of his age and the 60th of his ministry, bequeathed to the college a part of his library. The extent or value of this bequest it is now impossible to determine, as no record was made of it at the time. Among the books thus presented, however, there is one which deserves particular mention. It is a copy of Roger Williams's "Bloody Tenent yet more Bloody," being the copy originally presented by Williams to his friend and fellow-laborer, Dr. John Clarke. On a blank leaf it contains the following words in Roger Williams's handwriting: "For his honored and beloved Mr. John Clarke, an eminent Witnes of Christ Jesus, ag'st ye bloodie Doctrine of persecution, etc "

In 1815 Mr. Nicholas Brown gave five hundred dollars for the purchase of books, and Mrs. Hope Ives presented a copy of Dobson's edition of the Encyclopaedia Britannica.

The next, and the most valuable of all the donations to the library which we have to record, is the legacy of the Rev. William Richards, LL.D , of Lynn, England. Mr. Richards was a native of South Wales. He was many years pastor of the Baptist church at Lynn, where he died in the year 1818, in the 69th year of his age.

Mr. Richards seems to have been a man of considerable learning, particularly in English and Welsh history, and in the Welsh language and literature. His writings are historical, political, and controversial. His most important work is the History of Lynn, in 2 vols. 8vo. Dr. Evans says of it: "It is not only well written, the style perspicuous and manly, but it is replete with information as well as entertainment." His Review of Noble's Memoirs of the Protectoral House of Cromwell is characterised by Lowndes as "severe, but at the same time just." "His dictionary of Welsh and English," says Dr. Evans, "a work of minute and wearisome labor, is in high repute." Mr. Richards was of the *General Baptist* denomination, and a strong advocate of religious liberty. It was his love of the liberal character of this institution which induced him to bestow upon it his library, as appears from the following passage in his Memoirs: "Mr. Richards had corresponded with Dr. James Manning, once President of the Baptist College in Rhode Island. From this gentleman he learned the liberal constitution of that respectable seminary, and for some years previous to his death meant to bequeath to it his library. He accordingly made inquiry of Dr. Rogers [of Philadelphia] whether it was still conducted on the same liberal footing, in which case he should cherish the same generous intentions towards it." This inquiry was answered by Dr. Messer, then President of the college, in a letter from which it may be well to extract the following passage: "Though the charter requires that the President shall forever be a Baptist, it allows neither him, in his official character, nor any other officer of instruction, to inculcate any sectarian doctrine; it forbids all religious tests; and it requires that all denominations of Christians, behaving alike, shall be treated alike. This charter is congenial with the whole of the civil government established here by the venerable Roger Williams, who allowed no religious tests, and no pre-eminence of one denomination over another; and none has ever been allowed unto this day. This charter is also congenial with the present spirit of this State and of this town."

Gratified with this letter, Mr. Richards beqeathed his library, consisting of about thirteen hundred volumes, to Brown University. It is a singular fact, that his will was made on the very day on which the honorary degree of Doctor of Laws was conferred upon him by this college. Mr. Richards had received no intimation that the honor was intended for him, nor did he live to hear that it had been bestowed.

The library which he bequeathed to the college is, in many respects, valuable. It contains a considerable number of Welsh books, a large collection of valuable works, illustrating the history and antiquities of England and Wales; besides two or three hundred bound volumes of pamphlets, some of them very ancient, rare, and curious.

For the next valuable accession to the library—designated as "the subscription of 1825"—the college is indebted to the efforts of Mr. Horatio Gates Bowen, who was librarian of the institution from 1824 to 1841. At his request several of the friends of the college subscribed eight hundred and forty dollars, which sum was expended in the purchase of books.

Between 1823—5, fifty-four volumes of valuable scientific works, including Cloquet's Anatomie, Lamarck's and De Candolle's Flore Française, Cuvier's Règne Animal and Wilkins's Vitruvius, were presented by Mr. John Carter Brown and Mr. Robert Hale Ives. Often, since that time, the names of these gentlemen and of Mr. Moses B. Ives appear among the benefactors of the library.

About the year 1823, a splendid donation, consisting of one hundred and three volumes, comprising the best editions, mostly in quarto, of the works of the celebrated French mathematicians, Euler, Lacroix, Lagrange, La Place, etc., besides many valuable theological works, was made by the Rev. Thomas Carlile.

In 1826 Messrs. Brown & Ives presented, through Dr Homer, fifty volumes of rare and expensive theological works. In the same year donations were received from the Hon. William Hunter, LL. D., and from Usher Parsons, M. D.

On the return of Prof. Elton from Europe, in 1827, donations were received, through him, from several distinguished gentlemen in Europe—in all, two hundred and eighty-three volumes; besides eighty five volumes of classical and miscellaneous works purchased by him at the order of Messrs. Brown & Ives.

The libraries of the Philophysian and Franklin Societies, composed of undergraduates, when these societies became extinct, were, by provisions of their constitutions, incorporated with the College Library. They together contained three or four hundred volumes.

The government of Great Britain presented, in 1835, one hundred and ten volumes of the publications of the Record Commission.

In 1838 Mrs. Elizabeth H. Bartol, wife of the Rev. Cyrus A. Bartol of Boston, and Mrs. Hepsy S. Wayland, wife of President Wayland, presented three hundred and fifty-six volumes of standard works in French and Italian literature.

The Rev. Jonathan Homer, D. D., of Newton, Massachusetts, at various times, made valuable donations of rare and costly theological books, including some valuable editions of the Bible. Many of these donations contain copious and useful manuscript annotations by the learned donor.

Among the additions to the library, a collection of fifty volumes of Ordination Sermons, presented by the Hon. Theron Metcalf, of Boston, a graduate of the college in the class of 1805, deserves particular notice. These volumes contain more than a thousand discourses preached at ordinations, installations, and inaugurations in the United States, and mostly in New England. This is without doubt the largest collection of the kind which has ever been made, and is of obvious importance as connected with the ecclesiastical history of the country.

The library fund next claims our attention. "At a meeting of the standing committee of the corporation of Brown University, held January 10, 1831, it was unanimously resolved—

"1. That immediate measures be taken to raise, by subscription, the sum of *twenty-five thousand dollars*, to be appropriated to the purchase of books for the library, and apparatus for the philosophical and chemical departments of Brown University.

"2. *Resolved*, That the chairman and Thomas P. Ives be a committee to carry the foregoing resolution into effect.

"F. WAYLAND,
"*Chairman.*"

Soon afterwards, a meeting of the friends of the institution was called for the purpose of seconding this effort. At this meeting the wants of the library and the importance of supplying them were presented and urged. Previously to this, however, the Hon. Nicholas Brown had, with his wonted munificence, subscribed ten thousand dollars towards the fund. The subscription was opened, with the following conditions:

1. "The whole amount shall be invested in a permanent fund, of which the interest shall be, from time to time, appropriated exclusively to the objects stated in the resolution.

2. "The selection of books and apparatus shall be made by joint committee of the corporation and government of the university.

3. "One-third of the amount subscribed shall become due on the 1st day of October, 1832, another third on the 1st day of October, 1833, and the remainder on the 1st day of October, 1834.

4. "A copy of the subscribers' names, and of the sums subscribed by each, shall be deposited in the library, and another among the archives of the university."

The sum thus obtained, amounting to $19,437 50, was placed at interest until it had accumulated to twenty-five thousand dollars, and was then invested in a permanent fund, according to the provisions of the subscription, as above specified. The first dividend became due in July,

1839. Since that time the proceeds have been regularly appropriated according to the design of the donors.

The room appropriated to the library, at the time when the library fund was raised, "was an apartment in University Hall, crowded to excess, unsightly and wholly unsuited for the purpose to which, from necessity, it was devoted." To remedy this defect, the Hon. Nicholas Brown erected, at his own expense, a beautiful edifice for a library and chapel; to which, in testimony of veneration for his former instructor, he gave the name of Manning Hall. This building was dedicated in 1835.

Soon after the removal of the library to the new building it was newly arranged, and in 1843 a full catalogue of its contents printed. This catalogue was favorably noticed in the North American Review, and in other leading periodicals, and drew special attention to this important department of the institution.

Soon afterwards a chair of modern languages was established at the college; and the professor elect was encouraged to visit Europe, partly for the purpose of professional study, and partly to enable the friends of the college to carry out more effectually their wishes for the increase of the library. This agent was authorized by Mr. John Carter Brown to select and purchase, at his expense, such books in the French, German, and Italian languages, to the value of about $2,700, as he might think most useful for the college. The selection was made, both of works and of editions, *without regard to cost;* but the books were purchased with the closest reference to economy. For about $2,600 dollars the number of volumes of bound books purchased was 2,921—viz: 121 folios, 392 quartos, 1,627 octavos, and 781 duodecimos, besides 74 valuable maps and engravings. These books were *all* well bound, most of them newly and elegantly, in half calf, plain gilt. The average price per volume, including binding and all other expenses, was about 89 cents. This collection includes a set of French, German and Italian classics, in the best and fullest library editions; the principal philosophical, scientific, and historical works of late continental scholars; a complete set of the "*Moniteur Universel*," from its commencement to 1826—a clean, beautiful, well bound copy of the original edition, with the introduction, indexes, &c., in 77 vols. folio; a set of the memoirs of the French Institute since its reorganization,—vols. 4to.; the collection of memoirs relative to the history of France, by Guizot and Petitot, 162 vols. 8vo.; a complete set of the *Allgemeine Literatur Zeitung*, 134 vols. 4to.; and of the *Allgemeine Deutshe Bibliothek*, 139 vols. 8vo.; *Il Vaticano*, 8 vols. folio, elegantly illustrated; *Il Campidoglio*, 2 vols. folio; the *Museo Borbonico*, 13 vols. 4to., the original Naples edition; the works of Canova and Thorwaldsen—the *Musée Français* and *Musée Royal*, in 6 vols. folio; the *Description de l'Egypte*, Canina's Achitecture, and many more illustrated works of great beauty and value, besides rare and costly maps and prints. These books were mostly purchased at auctions in Paris, Rome, Leipsic, Frankfort on the Maine, and Berlin. Many were purchased at provincial sales. To supply the deficiencies of the library in standard English works, a subscription was opened among the friends of the college, amounting to about $5,000, and the same agent was appointed to select and purchase the books. This collection was received in the library in 1845, and raised the whole number of volumes to nearly 20,000.

The class which graduated in 1821 held a meeting in Providence, a quarter of a century from the time of their graduation, at which a considerable sum of money was subscribed for the benefit of the library, in token of their grateful interest in the institution at which they were educated. The money thus obtained was placed in the hands of Dr. Thomas H. Webb, of Boston, who purchased, with excellent judgment, about five hundred volumes, mostly from the library of the Hon. John Pickering.

The next year, 1847, the Rev. Samuel Osgood, then a clergyman in Providence, and now in New York, proposed to the several religious societies of the city a subscription for the purpose of supplying the deficiencies of the library in the best editions of the Fathers of the church, and the standard theological writers of the Reformation. About $2,000 were raised, and a superb collection was purchased of the Benedictine editions of several of the Fathers; the Bibliotheca Maxima Veterum Patrum, 30 vols. folio; Harduin's Collectio Conciliorum, 12 vols. folio; besides the choicest and most elegant editions of many of the Fathers not edited by the Benedictines, and a large collection of works connected with patristic literature, and the history of the Reformation.

The library committee had before this issued a circular, soliciting the donation of files of newspapers, important pamphlets, &c. In answer to this call a vast mass of pamphlets and papers were sent to the library. From the whole about 5,000 were assorted and arranged, and they form now an invaluable collection. Brown University certainly deserves great credit for the care with which she has garnered and guarded these neglected but precious memorials of our earlier history.

In 1793 the library contained 2,173 volumes; in 1826, 5,818 volumes; in 1843, 10,235; in January, 1849, 21,520, exclusive of pamphlets and of duplicates; in January, 1850, the number of volumes was about 23,000.

It has a large number of maps, charts, engravings, and elegantly illustrated works. Since January, 1843, 11,300 volumes have been added to the library. During the last eight years about $20,000, being the proceeds of the library fund, and donations from individuals, have been expended for the purchase of books. From the income of the fund about $1,200 per annum is appropriated to the purchase of books. The building (called Manning Hall) is built of rubble stone, and is stuccoed. The library occupies the whole of the ground floor. Its dimensions are 64×38 feet, height 13 feet. In the centre is a double row of fluted columns, from which the shelves extend to the walls, forming twelve alcoves. The books are, so far as convenient, arranged on the shelves according to subjects. The first catalogue was printed in 1793; the second in 1826; and the third and last in 1843, [560 pp 8vo.] This catalogue is alphabetical, according to the authors' names, and has a copious alphabetical and analytical index of subjects. A supplement, nearly as large as the original volume, and on the same plan, is now in preparation. The library is open, during term time, daily from 10 a. m. till 2 p. m.; during vacations, weekly, on Saturdays, from 12 to 1. The members of the corporation; the president, professors, tutors, and register; all resident graduates; all the donors to the library fund; all donors to the fund for building Rhode Island Hall; and all donors to the library to the amount of $40, residing in the city of Providence, are entitled to the use of the library without charge. Undergraduates are entitled to the use of the library, and are charged therefor one dollar per term. During the year 1848, from January 7 to December 5, 4,069 volumes were taken out. The number of books taken out increases every year. The privilege of consulting the library is extended, with such restrictions as the library committee may from time to time prescribe, to all graduates of the University; to all settled clergymen, of every denomination, residing in the city of Providence and its vicinity; and to all other persons on whom, for the purpose of advancing the arts, science or literature, the corporation or library committee may confer it. Books are occasionally lent to persons at a distance, by special permission of the library committee or the corporation.

The present librarian is Reuben A. Guild, A. M.

There are two literary societies of students connected with the University—the Philermenian Society, founded in 1794, and the United Brothers Society, founded in 1806. Each has a library of about 3,600 volumes. They have issued elegant and well prepared catalogues. To the beautiful catalogue of the Philermenian Society, published in January, 1849, is prefixed a history of the society, by Mr. B. F. Thurston.

The Athenæum Library—15,204 *vols.*—The Athenæum was incorporated by act of the General Assembly of Rhode Island, January, 1836. It was formed by the union of the Providence Library (founded in 1753) and of the Athenæum, (founded in 1831.) The library contained, in September, 1849, 15,204 volumes. The yearly average increase for the last ten years has been 800 volumes; the average annual expenditure for books, $1,200. There is a fund of five thousand dollars for the increase of the library, yielding $331 50 per annum. This fund will soon be increased to eleven thousand dollars.

A granite building was erected in 1838 for the use of the Athenæum, at an expense of nearly $15,000. The following description of the edifice is taken from the third report of the directors:

"Principal story.—The floor of the principal story is about fifteen feet from the sidewalk in front of the building; this distance is divided by side steps at each end of the bank in front; steps in the centre of the front of the building, six feet high, approached over a gravel walk on the top of the bank, conduct to the front entry, which is eight feet wide by thirteen feet long. There are two rooms on each side of the entry, communicating with it, thirteen by eighteen feet each—one intended for a reading-room for periodical publications; the other for directors' meetings, committees, &c.

"The library, or principal room, is entered through the front entry, or through either of the rooms just mentioned. It is thirty-two feet long by forty-three feet wide on the floor, and about forty-four long by forty-three wide, from within about seven feet below and up to the ceiling; this difference in length between the upper and lower parts of the room is caused by the space left over the reading and directors' rooms, which is taken off from the library room. Those two rooms are ten feet high; the library room is eighteen feet high. There is also another room eighteen feet high, in the rear of the library room, entered through it, the dimensions of which are twenty by forty-three feet."

A catalogue was printed in 1837, of 116 pages 8vo.; and a supplement of 108 pages 8vo. in 1839. Another is nearly ready for the press.

The library is open every day, Sunday excepted, from the first of April till the 1st of October, from 9 a. m. till sunset; from October to April, from 10 a. m. till 9 p. m.

Persons entitled to the use of the books are owners of shares; the price of a share is $15, subject to an annual tax of $5.

Every shareholder has the right of taking out two books at a time. There are more than 500 shares, nearly all of which are used. It is impossible to say how many consult the library annually. The number, however, is very large. According to article 10th of the library regulations, the board of directors may authorize persons not connected with the institution to make use of the library Thomas Hale Williams, librarian.

"This is a very well selected library, embracing the most important works in all those departments of English literature which are adapted to the general wants and tastes of an enlightened community." It may perhaps be considered the best English library of its size in the country. The department of periodicals receives particular attention. Fifty-nine reviews, literary and scientific journals, and newspapers, are regularly taken, and are read "with fresh and ever increasing eagerness." With one exception, they are all in the English language. Great care has been exercised to procure all the back numbers, so that the series are generally complete, with all the indexes, &c.

This institution has been justly pronounced "a model for all similar establishments." [Bibliotheca Sacra, January, 1850.] We understand that Mr. Alexander Duncan has recently presented to the institution the sum of ten thousand dollars, in compliance with the wish of his uncle, the late Cyrus Butler, whose estate descended to Mr. Duncan.

Library of the Mechanics' Association—3,300 vols.—A catalogue of this library was printed in 1821, in 12mo.

The Rhode Island Historical Society—2,500 vols.—This society was founded on the 19th of April, 1822, and incorporated by the General Assembly the June following. The society has published several volumes of "Collections." It has been faithful and active in collecting the materials for the history of the State, and preserving them for future use. "After the decease of the Hon. Theodore Foster, the society purchased of his representatives the collections which he had been engaged in making during a long life devoted to historical research. They have procured copies to be made of all orders and papers in the office of the secretary of State in Massachusetts, relating to this State. The papers collected by the Rev. Isaac Backus, author of the History of the Baptists, are deposited in the cabinet, as are also the letter-book and correspondence of Ezek Hopkins, the only individual who ever received a commission as admiral in the navy of the United States." The society has taken great pains to complete its files of newspapers printed in the State. Most of them, including the Providence Gazette, are nearly perfect.

Soon after its incorporation the State gave the society $500. The heirs of the late Nathan Waterman presented a lot of land for a building. In 1843 the society had accumulated a fund of $4,000 for an edifice. About $2,000 more were then raised by subscription, and in 1844 a stone building was erected on Waterman street, facing the College square, to which the collections of the society were removed, and in which its meetings have since been held. The library contains about 2,500 volumes, mostly historical. [See account of the Rhode Island Historical Society, by W. R. Staples.—*American Quarterly Register, May*, 1839, pp. 362–8.]

Friends' Boarding School Libraries—1,500 vols.—The library of this well-endowed institution consists of three parts, of which the principal contains about 1,000 volumes, irregularly arranged in a room in the central building. It embraces a general collection of English, scientific, and literary works, (novels excepted,) mostly the bequests of the late Moses

Brown and his son Obadiah Brown—being their private libraries. No special appropriation has been made for a regular increase of the library; consequently it is falling behind the modern improvements in science. Some small additions of late works are, however, made every year.

Two other collections of books, of rather a juvenile character, are kept in each wing, more particularly for the use of the pupils. These contain about 250 volumes each—making the aggregate of what are termed the library books, about 1,500 volumes. This number does not include the books of reading and study used by the pupils in their daily exercises, for which purpose about 600 volumes are in use. These are the property of the institution; some are furnished gratuitously, and a part are lent to the students for a compensation. There is no printed catalogue of the library. All the pupils are entitled to the use of the books in the juvenile departments, and to those of the central library at the discretion of the librarian. The officers use the central library at their pleasure.

The Franklin Society, Providence, Rhode Island, founded in 1823, has a library of 500 volumes, slowly increasing. Every member of the society has a key to the library room, and may use the books when he pleases.

PUBLIC SCHOOL LIBRARIES—19,637 VOLS.

Within the last four years, under the exertions of Mr. Henry Barnard, the enlightened and energetic commissioner of public schools, public libraries have been established in every town in the State, with the exception of Johnston, Bristol, and East and West Greenwich. These libraries are composed of well-selected books, and are accessible to the whole population. The money for purchasing them was mostly subscribed by public-spirited individuals.

I am indebted to Mr. Barnard for the following list of these libraries, with the number of volumes which they contain.

"Portsmouth—school district No. 1—650 vols.—This was the first library established in the State, as a part of the recent movement to improve the means of popular education. It owes its origin mainly to the liberal donation of $100 by Miss Sarah Gibbs, a resident in the district.

North Providence—four districts—aggregate, 1,200 vols.
Cumberland Hill—500 vols.
Smithfield—Bernon village,
" Lonsdale Athenæum—1,000
" Slatersville—800 } 3,475 vols.
" Hamlet village,
" Globe,

"The library at Lonsdale was purchased by the commissioner, at an expense of about $550, which was paid by the Lonsdale Company The books are lent out to the inhabitants, old and young, of the village, at a small charge of one cent per volume. More than seventy dollars were realized the first year from the circulation of the books.

"The library at Slatersville was purchased out of an appropriation of $500 made by Messrs. Slater, Lockwood and Carter.

"Burrillville—Pascoag Manton Library—900 vols.—This library and the libraries in Glocester, Foster, Cranston, Hopkinton, Richmond, Charleston, Exeter, Little Compton, New Shoreham, Jamestown, and Barrington, owe their existence mainly to the liberality of Amasa Manton, esq., of

Providence. By an aggregate expenditure of about $1,000, he has been instrumental in raising in these towns double that amount, and has thus secured the establishment of ten libraries, with at least five thousand good books. Who can estimate the blessings, individual and social, which will flow directly and indirectly from the dissemination of these books, and which will continue to flow yet more abundantly when the liberal donor has himself passed from the earth, and another generation has risen up to have access to these libraries?

Glocester—Manton Library	800 vols.
Foster—Manton Library	1,000 “
Scituate—Aborn North School Library	500 “
Cranston—School Library	400 “
Middletown—School Library	300 “
Little Compton—Manton Library	600 “
“ Social Library	500 “
New Shoreham	400 “
Jamestown Library	700 “
“ Manton Library	400 “
Coventry—Washington village	400 “
Bowen's Hill Library	400 “

“The library first named was given to the district by subscribers residents thereof. The Bowen's Hill library owes it origin to a liberal contribution from Mr. Tully Bowen, of Providence.

Warwick—Ladies' Library	500 vols.
“ Old Warwick Library	250 “
Westerly—Pawcatuck Library	2,000 “
Hopkinton and Richmond—Manton Union Library	800 “
Exeter—Manton Library	662 “
Charlestown—Manton Library	500 “

“South Kingston.—Besides a small library (200 vols) at Kingston, there is an itinerating library consisting of about 400 volumes, which are divided into four cases, each case containing about 100 books, and these cases pass in succession through the several villages in the town.

Warren Lyceum	500 vols
Barrington—District No. 2	500 “
Tiverton—Globe district	150 “

“Most of the libraries recently established are open to all persons resident in the town, who will pay one cent a week for the use of a volume, and comply with the regulations which may have been adopted for the preservation of the books.”

Mr. Barnard (in the “Report and Documents relating to the Public Schools of Rhode Island for 1848,” pages 425 seq.) has given a historical and statistical account of the several libraries in the State, with a sketch of the organization and the history and by-laws of the Pawcatuck Library Association, as a favorable specimen of a public school library. He has also published the catalogue of this collection, in 94 closely printed 8vo. pages. This library was selected by Mr. Barnard, and the catalogue, with some very judicious explanatory remarks and select hints on reading, was prepared by him. We extract the following paragraphs descriptive of the catalogue, remarking, that admirable judgment has been shown in the choice of books and in the means adopted for rendering them useful:

"The first of the following catalogues is a *catalogue of subjects.* Its design is not simply to give *the titles of the books* of the library, but to furnish an *index to the subjects considered in the books.* To effect this, the various books in the library have been analyzed with considerable care, and the several subjects exhibited by them have been arranged under their proper heads. The analysis has been confined to distinct treatises and separate articles on subjects. The design of the analysis, it is thought, has been accomplished—viz: to make the catalogue so full that no one shall be obliged to remove a book from the shelves in order to learn its contents or subjects, and that those who use the library may make their selection of books directly from the catalogue. Thus the convenience of persons in their selection will be greatly promoted, and the injurious handling of the books be prevented.

"In addition to the catalogue of subjects, a *catalogue of authors* is also given, in which *the names of all the authors in the library are placed alphabetically*, and under each name all such works of that author as belong to the library.

"By the aid of these two catalogues any person, even those the least familiar with books, may very readily refer to any work or any subject which they may wish to examine.

"In both catalogues the number of each book, as it stands on the library shelves, is carried out on the margin of the page against its title."

CONNECTICUT.

EAST WINDSOR.

Library of the Theological Institute—3,500 *vols.*—The books in this library (founded in 1833) are mostly theological. They are primarily for the use of the faculty and students of the institute. The library is open twice a week. The institute was founded in 1833 by the Congregationalists. It was incorporated in 1834.

HARTFORD.

The Library of the Young Men's Institute—10,000 *vols.*—This library contains about 10,000 volumes, increasing at the rate of about 500 volumes per annum.

An excellent catalogue, prepared on the same plan as that of the library of Brown University, was printed in 1844, containing 359 pages 8vo. A supplementary catalogue (in 32 pages 8vo.) was printed in 1847.

The preface to the catalogue contains the following historical sketch of the institute:

"The Hartford Young Men's Institute owes its origin mainly to the interest awakened on the subject of lyceums and associations for mutual improvement by the lectures and discussions before the American Lyceum, at its annual meeting held at Hartford, May, 1838. The importance of establishing an institution in which all the young men of the city might associate for purposes of moral and mental improvement, was discussed among individuals, and notice for a public meeting at Union Hall, on Friday evening, May 19, 1838, was given in the newspapers of the city.

"A public meeting was accordingly held, of which the Hon. Thomas S. Williams was made chairman, and William James Hamersley secretary. On motion of Erastus Smith, and after remarks by Rev. T. H. Gallaudet, General Johnson, Rev. Mr. Sprague, and Erastus Smith, it was resolved, *that the young men of Hartford associate together for the purpose of mutual improvement.* The plan of an association was then discussed, and its further consideration postponed to an adjourned meeting to be held on Monday evening, June 4. On that evening the meeting was organized by appointing Henry Barnard, 2d, chairman, and Erastus Collins secretary. The articles of association, under the name of the 'Hartford Young Men's Institute,' were then discussed and adopted."

On the 5th of June the association was organized by the appointment of officers.

"The officers of the institute immediately issued a circular, [setting forth the importance of such an institution, and appealing to the public for support,] and on the evening of the 4th of July the president delivered a public address, setting forth the claims of this and similar institutions upon the liberal support of the community, and especially upon the young men.

"These appeals were promptly responded to by a large accession of members, and liberal subscriptions in books and money, so as to enable the executive committee to put the main departments of the institute into successful operation. A reading-room was opened, a library of twenty-six hundred volumes was established, a course of twenty lectures secured, two debating classes formed, and eighty-three life members and three hundred and forty four annual members subscribed to the constitution of the institute.

"Before the close of the first year an arrangement was effected with the share-holders of the Hartford Library Company, by which their valuable collection of books, amounting to about three thousand volumes, was transferred to the institute.

"At the first quarterly meeting of the institute, the executive committee were directed to take the necessary steps to procure an act of incorporation. Application was accordingly made to the General Assembly, at its next session, in May, 1838, and a special act of incorporation was obtained under the name of the 'Hartford Young Men's Institute.'

"At the first annual meeting of the institute this act of incorporation was accepted, and the former constitution, with some modification, adopted as the by-laws for its future government. During the year 1839-'40, the number of annual members was four hundred and five. At the close of the year 1842, there were five hundred and forty members; of which number, seventy one were life-members, twenty-six were members in virtue of being share-holders in the Hartford Library Company, and twelve were members having the privilege of the library only.

"During the year 1843-'44, the library was enriched by a larger and more valuable purchase of books than in any former year—eight hundred and eighty-two volumes having been purchased by the library committee, besides one hundred and sixteen volumes which were presented by friends of the institute. The interior of the rooms in *Wadsworth Athenæum,* appropriated to the institute. have been fitted up under the direction of the executive committee, mostly from subscriptions obtained for that purpose.

"During the brief period of its existence, the success of the institute has more than realized the anticipations and promises of its earliest friends. More than one thousand young men, from every walk and employment of life, have been enrolled among its members; and through them, more than two-thirds of all the families of the city have felt the influence of the institution in some one or all of its departments of usefulness. Two classes for debate have afforded opportunities for acquiring mental discipline, and the correct, ready, and elegant use of the English language, in discussions of questions of civil, social, and literary importance, at the weekly or monthly meetings which have been held during the whole time. The reading room, embracing the most valuable publications in the periodical literature of this country and of England, has been visited at all hours during the day and evening, by members, and strangers introduced by them, who have had any leisure to spend in this form of relaxation and instruction. The library (which, within six months after the first meeting for organization, comprised over five thousand valuable works) has every year, since, received large accessions of whatever of good, or great, or beautiful, the English or American mind has produced, till the range of selections embraces about nine thousand volumes. It has scattered the pleasures and advantages of knowledge broadly through society—more than one hundred thousand books having been drawn from its shelves. The lecture-room, for upwards of one hundred evenings in all, in the autumn and winter of each year, has attracted crowded audiences of the members and their friends, to listen to addresses by some of the most eminent professional and literary men of our land, who have thus brought philosophy, science, and literature from the office, the study, and cells of scholars, to the workshop, the daily business, and the firesides of men. And, in entering on the seventh year of its existence, the institute is in the permanent occupancy of one-third of Wadsworth Athenæum—a spacious, safe and massive edifice; chaste, beautiful and attractive in its architecture; central in its location; affording ample accommodations for the library and reading-room, the classes for debate and mutual instruction, the weekly meetings of the executive committee, and the regular quarterly and annual meetings of all the members, under the same roof with the other literary and scientific institutions of the city—a structure consecrated to the pursuits of literature, science, and the arts; a monument at once of the munificence of the individual whose name it bears, and of the public spirit of the citizens by whose liberality it was erected.*

"Every member of the institute who shall have paid all sums due from him to the institute, and made good all damage and loss which he may have occasioned, and any person by paying $3 a year in advance to the librarian, shall be entitled to all the privileges of the library and reading-room.

"The library shall be open for the delivery and receipt of books every day (Sundays excepted) from 10 a. m. until 9 p. m."

In the eighth annual report, presented June 6, 1846, we find the following table, exhibiting the number of volumes in the library at the close of each year; the number of volumes presented; the number of volumes purchased; and the amount of money annually expended upon this department:

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*The Wadsworth Athenæum was erected for the joint accommodation of the Young Men's Institute and the Connecticut Historical Society. It also contains a gallery of art. Daniel Wadsworth gave the land, valued at $15,000, and the citizens subscribed about $32,000 for the building.

	No. of vols.	Donations.	Purchases.	Money expended.
First year..........	5,620	Vols. 800	Vols. 1,500	$1,261 91
Second year........	6,335	" 159	" 597	831 80
Third year........	6,924	" 126	" 463	678 57
Fourth year........	7,453	" 175	" 478	443 39
Fifth year..........	7,819	" 75	" 280	393 43
Sixth year..........	8,701	" 116	" 882	1,078 80
Seventh year.......	8,871	" 121	" 49	596 13
Eighth year........	8,989	" 21	" 97	46 21
	Whole amount of money expended			5,330 24
	Average amount per annum -			666 28

Owing to the time and labor required in making the necessary estimates, few of the reports announce the number of volumes annually circulated by the institute.

The following are the estimates that have been made:

Circulation, first year - - - - 2,000 volumes.
Circulation, fourth year - - - 25,178 "
Circulation, fifth year - - - - 23,250 "
Circulation, eighth year - - - 25,115 "

The State Library of Connecticut, at Hartford.—Under the care of the Secretary of State are some 3,000 volumes of public documents and miscellaneous books, forming a nucleus for a State library. No distinct department of the kind has as yet been organized.

The Library of the Historical Society of Connecticut—7,000 *vols.*—This society was incorporated in 1825. Owing, however, to the removal of several of the more prominent members from the State, its operations were suspended for several years. Its charter was revived in 1839. Soon after which time, chiefly through the intervention of Mr. Henry Barnard, (now the commissioner of schools in Rhode Island,) the present library was obtained.

This remarkable collection was made by Rev. Thomas Robbins, D. D., a clergyman of Rochester, Massachusetts, formerly of East Windsor, Connecticut, one of the founders of the society. In early life he determined to buy about $200 worth of books every year. This he continued *nearly half a century*, till he had accumulated about 5,000 volumes. It is a curious and valuable collection. In the year —— it was transferred to the Historical Society, by an arrangement, which constitutes the venerable collector librarian for life, and gives the library to the society.

Trinity College Libraries 9,000 *vols.*—Trinity College, formerly called Washington College, was incorporated by act of the legislature in 1823.

"There are 3,000 volumes belonging to the college, arranged in alcoves, and occupying a room in Seabury Hall, in which are also the portraits of several officers and benefactors of the college. There are also two *libraries* belonging to societies of under graduates, containing an aggregate of 6,000 volumes."—[*College Calendar.*]

MIDDLETOWN.

Wesleyan University Libraries—11,123 vols.—The Wesleyan University was incorporated in 1831; the library was commenced the same year. It contained August 1, 1848, 5,623 volumes, a few MSS., maps, and coins. About 100 volumes are yearly added, and about $100 expended annually for the purchase of books. An income of about $225 per annum is derived from a tax upon the under-graduates. A catalogue was printed in 1837, containing 50 pages 8vo. The library is opened every Monday and Thursday in term time, at 12 m., for half an hour. The persons entitled to the use of the books are: the faculty, president, graduates, and under-graduates. The last pay $2 per annum. Professor John W. Lindsay, librarian.

Besides the college library, the Peithologian and Philorhetorian Societies of students, connected with the university, possess 5,500 volumes. The following remarks, prefixed to the catalogue of the college library, give some account of that publication and of the history of the collection:

"The following catalogue has been prepared for the convenience of the librarian and students of the university. As the time which could be devoted to its preparation would not admit of a detailed account of the subjects, edition, and other particulars of each work, which are necessary to a full and complete catalogue, nothing further has been attempted than an enumeration of the titles, briefly stated as might be, and alphabetically arranged, generally with reference to the subjects.

"The library has been enriched by many valuable donations, only a few of which can be here noticed. The most valuable was made by Thomas Chapman, esq., of Camden, New Jersey, and is called, as a token of respect to the donor, the Chapman Library of the Wesleyan University. This portion of the library, in number about 2,000 volumes, consists of all the books in cases D, E, and F, except such as are marked with a †. There are among them 177 folios and 121 quartos. Of these, 1,655 volumes were fixed at a low price: one half of the amount was presented by Mr. Chapman, and the other half paid by the trustees. The remainder of the 2,000 volumes was given with no reserve but the privilege of adding to the number. Among the latter is a splendid copy of the Antwerp Polyglot, in 8 folio volumes. That part of the catalogue distinguished by a §, numbering 375 volumes, was the library of the late John Summerfield, and presented to the university by his brother-in-law, James Blackstock, esq., of New York. Those distinguished by a *, are books presented by the British conference, valued at £100. Other valuable presents have been made by authors and other individuals, of which more specific notice cannot be taken in this place."

The Friendly Association of Upper Middletown—434 vols.—The following notice is from a historical sketch furnished by Mr. Horace G. Williams. It would be difficult to point in this country to a better model for a village literary society, or to one which has been for a longer time uninterruptedly prosperous and useful, than the Friendly Association of Upper Middletown:

"A little more than a year preceding the establishment of the Friendly Association in this village, several gentlemen met together and formed a social club for mental improvement, under the name of the 'Debating Society.' It appears to have commenced with a very respectable number of members, and was conducted with considerable spirit for a time. The number of members became, after a while, greatly reduced; and it was resolved by the few remaining to make some changes in its management, preserving whatever of the constitution and by-laws was thought excellent. The new plan being favorably received by several individuals who were not connected with the 'Debating Society,' its reorganization under a better system seemed to promise success.

"On February 20, 1810, the first meeting was held, commencing with thirteen members; and, their object being the mutual improvement of each other, the name of the 'Friendly Association' was very appropriately chosen. After the adoption of the constitution for the society, the proceedings were regularly organized by the appointment of officers.

"Of the early members who were particularly active in establishing and sustaining the associations, the names of Messrs. William C. Redfield, Silas Sage, Joseph Williams, and Martin Ranney, may be mentioned with some degree of pride; the former of whom has, by his contributions to natural science since his residence abroad, secured a very distinguished reputation throughout the world. Many valuable features in the management of the society were suggested by him; he is still warmly attached to it, and has repeatedly manifested his interest in its prosperity. The foundation of a permanent library was a favorite measure with several of the original members of the association, and one of the first resolutions adopted was to appoint a committee for soliciting aid from its friends in the village. As the result of this effort, the sum of $11 25 in cash and 53 books, chiefly on biography, travels, and religious subjects, were received, the most liberal donations being from individuals not connected with the society. About two years later, an additional fund was raised by subscription among the members, amounting to $32 25; all of which was invested in the purchase of books for the library.

"The expenses of the association have been managed with considerable economy, its principal resources being the fee of one dollar paid by each person upon signing the constitution. Whenever an applicant for admission is elected, he receives a suitable address from the president, explaining his duties and privileges. As the society is always very cautious respecting the character of such, it has in no instance been forced to expel a member for a breach of its regulations. Quite a number of young ladies have joined the association, and the effect of their frequent presence at the meetings has been to stimulate the zeal of the gentlemen, and to render their performance more interesting. Neither sex is exempt from contributing a share of their time and labor for the mutual benefit; but, if any are too diffident to exhibit their own productions or prefer to communicate anonymously, a 'reader' is appointed for the purpose. The miscellaneous exercises usually embrace a variety of subjects; they consist principally, however, of original compositions, recitations of dialogues and selected pieces, reading of choice extracts, translations from the classics and modern languages, and reviews of literary publications. The meetings occasionally assume a conversational character: interesting anecdotes are related, natural curiosities and relics of 'old times' are shown, and chemical experiments are performed; and the members are always free to ask for information or to make critical remarks.

"The practice of inviting strangers to deliver occasional addresses and lectures before the society originated about twelve years since, and has been continued to the present time, with marked benefit to the members.

"The return of every anniversary of the association is always an event of some importance throughout our village, it being celebrated with a variety of performances appropriate to the time. Considerable preparation is made for these exhibitions, which usually include orations, essays, dialogues, and dramas, mostly original, together with songs and glees, or instrumental music. Of late years a small fee has been charged for admittance, and with the funds thus realized additions are regularly made to the library.

"Until 1834 the meetings of the association were held in an old schoolhouse which afforded very inadequate accommodations, the library being crowded into the space of a few feet, called the 'lobby,' in one corner of the room. By private subscription among the members, and a generous arrangement with the proprietors of the 'academy' building, the free use of a spacious and convenient hall was secured so long as the society might choose to occupy it. The room is neatly furnished, and, as the library can now be displayed to advantage, it presents quite an imposing appearance. The number of books has increased to 434, exclusive of several printed essays and documents; and of these about 75 volumes have been received from different members within a few years past. For a short time a regulation was in force allowing a person to join the society for one year on payment of fifty cents, but it has since been repealed. The actual number of life members is now 270. Since its organization 802 weekly and monthly meetings have been held, their interest being very uniformly sustained, and only twice have they been suspended for a longer period than usual. The young men of the village, either clerks, apprentices, students, or teachers, are generally its active members, the oldest and most capable of them being intrusted with the management of its affairs. Possessing a respectable library and a surplus in the treasury, the future success of the association alone depends upon the persevering efforts of its friends.

"HORACE G. WILLIAMS.

"UPPER MIDDLETOWN, *Conn., July* 11, 1850."

NEW HAVEN.

Yale College Libraries—50,481 *vols.*—In the year 1700, ten of the principal ministers met at New Haven and formed themselves into a society, and agreed to form a college in the colony. At their next meeting, which was at Branford, the same year, each of them brought a number of books, and, presenting them to the society, said: "*I give these books for the founding of a college in this colony.*"

Bishop Berkeley, about 1733, sent to the library from Europe "the finest collection of books that ever came together at one time into America." Sir Isaac Newton, Sir Richard Steele, Drs. Burnet, Woodward, Halley, Bently, Kennet, Calamy, Edwards, the Reverend Mr. Henry, and Mr. Whiston, presented their own works to the library.

The growth of the library till 1845 was very gradual. In that year a very large and valuable accession, selected and purchased in Europe by Professor Kingsley, gave to the library a new and vigorous impulse, and placed it among the best collections of books in this country.

It contained January 1, 1849, 20,515 volumes, including duplicates, of which there may be 200 to 300 volumes. The number of pamphlets is probably 3,000. The library contains also a few MSS., charts and engravings—not easy to specify in numbers. The MSS. bequeathed by President Stiles are in about 40 volumes. For the last ten years about 900 to 1,000 volumes have been added annually. During the same period the average annual expenditure for the purchase of books has been $1,620. There is a permanent fund of $27,000 for the increase of the library, yielding annually $1,620. In 1845-'6 a building was erected for the use of the College Library and the three society libraries. The material is red sandstone from Portland, Connecticut. The total cost, when stone steps and pinnacles are added, will be near $40,000. The books are arranged on the shelves according to subjects, as far as may be conveniently practicable. The books are not numbered. Catalogues were printed in 1743, 1755, 1791, 1808; the last (102 pp. 8vo.) in 1823. The library is opened every day in the year (except Sundays and three or four public days) in term time from 10 a. m. to 1 p. m., and from 3 to 5 p. m., and in summer commonly an hour or two more: in vacation, every day from 3 to 5 hours. The persons entitled to the use of the books are, the professors, members of the professional schools of the college, and members of the senior and junior classes. Seniors and juniors pay a small charge—others pay nothing. The privileges of the library are granted to many literary and scientific persons in town. Books are lent out, but consultation in the library is encouraged in preference. The number drawn out yearly, not known. The number actually out on one day when an examination was made, April 2, 1849, was 541. The term of loan is one month, except to the officers of the college, who frequently retain books until the general return in August. The number of visitors from curiosity and study is, in fair weather, large. The number of consulters may vary from five to fifteen daily. In answer to the question, Have the books been injured at any time by insects? Mr. Herrick remarks: "The *Lepisma saccharina* is common; brought in, probably, by old books. I cannot discover that it eats much. In my own library, at home, two books have been injured by some boring beetle or its larva, (probably a species of anobium,) so that I cannot doubt that books in our public libraries need examination once a year, at least, with reference to this matter." Books are lent to persons at a distance on application to the library committee, and without charge. For two or three years past books have been constantly out of town under this regulation. Edward C. Herrick, librarian.

See also American Quarterly Register, vol. 8, p. 14: Boston, 1836: 8vo.

Medical Library—900 vols.

Law Library—1,900 vols.

In the same building with the College Library, but in separate apartments, are the libraries of the three literary societies of the college, viz: the Linonian, Brothers in Unity, and Calliopean.

Statistics January 1, 1849:

	No. of vols. by actual count.	Average No. of vols. added per year for ten years past.	No. of volumes drawn out per annum.
Linonian Society - -	10,646	440	11,530
Brothers in Unity Society -	10,500	430	about the same.
Calliopean Society - -	6,020	170	about 5,000

The society libraries are opened statedly every day (or nearly) in term time for about 35 minutes, ending at 2 p. m. Each society librarian has usually three or four assistants. The librarian is selected from the senior class; the assistants are from the lower classes.

The last catalogue of the library of the Linonian Society, printed November, 1846, contains 274 pages 8vo. It has the following preface:

"The Linonian Society was founded in September, A. D. 1753. To the members of the society of the class of 1769, and of the classes immediately following, we are indebted for the foundation of the library. In the records of the society at that time is found a vote of thanks to Timothy Dwight, Nathan Hale, and James Hillhouse, for the first contribution of books.

"From the records and catalogues we are enabled to show the number of volumes at different periods. In 1770 there are stated to be nearly 100 vols.; 1780, 152 vols.; 1790, 330 vols.; 1800, 475 vols.; 1811, 724 vols.; 1822, 1,187 vols.; 1831, 3,505 vols.; 1837, 5,581 vols.; 1841, 7,500 vols. The present catalogue numbers 10,103 volumes.

"It has been attempted to adapt the present catalogue to general convenience. To this end it has been made as accurate and systematic as possible; each book is inserted under the name of the author, as far as could be ascertained, and again under the most prominent word of the title. The classified index will afford a view of the resources of the library in the respective departments therein designated."

The last catalogue of the library of the Brothers in Unity, containing 224 pages 8vo., was published in April, 1846. The following is the preface:

"The library of the society of Brothers in Unity is located in the north wing of the new College Library-building, and numbers at the present time 9,140 volumes.

"The oldest catalogue which we have seen, (probably the oldest in existence,) is a manuscript originally prepared by Judge Baldwin of this city, and by him lately presented to the library. Judge Baldwin was librarian of the class of 1781, thirteen years subsequent to the formation of the society. This valuable relic contains a list of only 163 volumes—but those carefully selected standard works. The library was at that time kept in a private room, and jealously closed against all except *members*. A collection of the printed catalogues, nearly if not quite complete, is to be found in the library of the college. It appears from these, that from 1808 to 1825 the various societies issued joint catalogues. The number of volumes in the Brothers library, at various periods since 1808, is as follows: 1808, 723 vols.; 1811, 756 vols.; 1814, 860 vols.; January, 1818, 937 vols.; September, 1822, 1,187 vols.; November, 1825, 1,730 vols.;

April, 1829, 2,550 vols.; September, 1832, 3,562 vols.; January, 1835, 4,565 vols.; June, 1838, 6,078 vols. It will be seen from this table that it has increased with much greater rapidity within the last few years than at any former period.

"The present catalogue differs in several respects from those which have preceded it. The list of authors has been very much increased—completed, so far as time would allow—and inserted in the body of the work. The whole has been rewritten, and in very many cases the titles of books given with greater distinctness. The index has also been rendered more perfect by the addition of three or four new divisions. Books can, therefore, be found almost invariably under the *name of the author*, usually also under the most prominent word of *their own title*, and finally under their appropriate subject in the index."

The Calliopean Society published a catalogue (94 pages 8vo.) on the same general plan as the others in February, 1846.

All these catalogues are well prepared, and elegantly printed. The libraries themselves are of great value. The societies are conducted with remarkable spirit. To the Brothers Society we are indebted for the publication of a very useful work, prepared by William Frederick Poole, entitled "An Alphabetical Index to subjects treated in the Reviews, and other Periodicals, to which no indices have been published; prepared for the library of the Brothers in Unity, Yale College. New York, Putnam, 1848: 154 pages 8vo."

Library of the Young Men's Institute—3,800 vols.

NEW YORK.

ALBANY.

State Library—23,274 *vols.*—Founded in 1818 It is in two departments, *the Law Library* and *the Miscellaneous Library*, containing—

Law Library—Law	5,825 vols.	
Statute law	1,253	
State papers	2,792	
		9,870 vols.
Miscellaneous library		13,353 vols.
Maps, atlases, &c., bound in volumes		51
Maps		97
Engravings		299
Painting and busts		4
Medals		25
Total		23,699

There is also a large collection of manuscripts connected with the history of the State, most of which have lately been received from the office of the Secretary of State, from which they were transferred to the State Library in pursuance of a joint resolution of the senate and assembly. A separate catalogue of these, forming 55 pp. 8vo., was printed in 1849, being No. 148 of the Assembly documents. Some of these manuscripts are of great interest and value. Among them are the original charter, or grant, of Charles II to his brother, the Duke of York, of this State, amongst others, in 1664; several royal commissions, of which the oldest is that of William and Mary, in 1689, constituting Henry Sloughter captain general of the province of New York; oaths of allegiance and office, extending from 1698 to 1810; certificates of entry for land and land patents; rolls of laws passed by the legislature of the province, &c.

The following appropriations have been made for the State Library since its foundation, in 1818, for the purchase of books, maps, charts, &c.:

1818 ($3,000 for books and fitting up rooms, &c.)	$1,500 00
1819 (annual appropriation)	500 00
1820 (annual appropriation)	500 00
1821	500 00
1822	500 00
1823	675 00
1824	500 00
1825	1,500 00
1826	1,300 00
1827	1,000 00
1828	1,000 00
1829	1,300 00
1830	801 44
1831	562 78
1832	1,645 44
1833	1,399 51
1834	1,236 38
" Globes	60 00
" 1st vol. Audubon	220 00
1835	1,240 93
" 2d vol. Audubon	220 00
1836	1,972 25
1837	1,219 39
" 3d vol Audubon	200 00
1838	611 51
1839	1,309 32
1840	1,006 43
"	163 49
" 4th vol. Audubon	200 00
1841	3,148 60
"	680 13
"	13 00
1842	2,560 91
"	155 83
1843	1,500 00
1844	3,972 53
1845	3,560 37
" Warden library	4,000 00
1846	3,328 64
1847	3,584 91
1848	4,347 18
1849	4,800 00
	62,995 97

The value of the donations to the library has been estimated by Dr. T. Romeyn Beck, secretary of the trustees, as follows:

Previous to 1844	$1,000
During 1844	253
1845	1,215
1846	1,915
1847	2,068
1848	800
1849	2,250
	9,501

"If to these we add the hundreds of volumes of laws, journals, documents, and law reports; the copies of the Natural History of New York, of the Journals of the Provincial Congress, &c., &c., presented by the State itself to the library, the total amount will considerably exceed ten thousand dollars."

Respecting the general character of the collection the select committee of the assembly on the library say, in their report dated February 3, 1849: "We feel constrained to say that we have been surprised and gratified to find such completeness in some of the departments, and the whole to be of such great value. An examination will convince all that it has become a worthy object of State pride. Already the law department is considered the most perfect of any similar collection in the States. It is believed, also, that nowhere can be found so many useful works on America and American affairs. The most unwearied pains have been taken; Europe and this country have been ransacked to procure everything valuable in this department. The value of these books cannot be estimated in money, for money could not replace very many of them. There are, also, valuable scientific, statistical, documentary, and miscellaneous works, otherwise inaccessible to Americans generally."

This library has, at different times, received large and valuable accessions through the agency of M. Vattemare. Nearly one thousand volumes, mostly in folio and quarto, besides maps, charts, &c., have been thus added to the library.

It is required by law that a catalogue of the State Library be published every five years. The trustees present an annual report to the legislature containing the lists of books added to the library since the previous report. The catalogue published January, 1844, contains two hundred and forty-five pages 8vo. The regents of the university, having been constituted trustees of the State Library by act of the legislature, (passed 4th May, 1844,) requested, in their report, (January 10, 1845,) permission to prepare and print, immediately, a new and improved catalogue. The legislature acceded to their wishes, suspending the enactment requiring quinquennial catalogues.

The catalogue published in 1846 is in two parts, paged separately. Part 1, is the catalogue of the law library, (252 pages 8vo.,) prepared by John L. Tillinghast: Part 2, catalogue of the miscellaneous library, (294 pages 8vo.,) prepared by George Wood. Pages 214-252 contain a minute and carefully prepared descriptive catalogue of the publications of the Record Commission of Great Britain. A new edition, dated January 1, 1850, has been printed. It contains 1,058 pages large 8vo , in parts. The first part, (245 pages) is an alphabetical catalogue of the law books, registered with the necessary fulness, under the names of the authors. The second part, in 35 pages, double columns, is a catalogue or index of the same books, arranged according to subjects. The titles of subjects are arranged alphabetically. The third part (pages 283-365) contains statute laws and State papers. This includes a list of Congressional documents since the formation of the government, in a tabular form, exhibiting the number and titles of the volumes published at each session of Congress, with the time of the commencement and termination of each session. The fourth part (pages 367-376) is a classification of statute laws and State papers, under nineteen heads, as commerce and navigation, debates, digests, diplomatic correspondence, &c. The fifth and largest part is a catalogue of the miscellaneous works, (pages 377-815) Part sixth is a classification of the miscellaneous works into five leading classes, namely: (1) theology, (2) government and political economy, (3) sciences and the arts, (4) history, (5) belles-lettres, with several subdivisions under each class. Part seventh contains a catalogue of works of art, globes, atlases, maps, plans, painting, engravings, busts, and medals, (pages 909-950.) Appended to these are lists of books received while the catalogue was in press, a list of donations to the State Library from its foundation to January, 1850, and a descriptive list of manuscripts received from the Secretary of State.

"The works in the miscellaneous department of the library, when not anonymous, are *lettered* with the author's name, and a brief title of the work. Each work is arranged on the shelves alphabetically, under the initial letter of the surname of its author. Anonymous works are *lettered* agreeably to their subjects, and placed in like manner under their initial letters. The octavos and smaller sized volumes are disposed on one set of shelves—the quartos and folios separately, on other sets of shelves. There are, however, some few exceptions to this order. Periodical works, such as magazines, registers, and reviews, scientific journals and publications of learned societies, together with the dictionaries, encyclopædias, and gazetteers, and other similar works of repeated reference, are withdrawn from the general arrangement and placed by themselves for more convenient consultation. The Warden collection it was thought advisable to keep, likewise, by itself. The works of this collection had been numbered by Mr. Warden, in his published catalogue, as they followed in his classification. These numbers have been cancelled, the works new numbered in their order in this catalogue, and indicated by the capital letters W. C., with the number. The maps, charts, and atlases have been treated in a somewhat similar manner, and arranged in the catalogue among the other maps and charts. The words *vide* and *see* are used in the catalogue for two distinct purposes: *vide*, when the reference is from one part of the catalogue to another; *see*, when the reference is to the book itself, on the shelves."

The library is open, during the session of the legislature and the courts, from 9 a. m. to 4 p. m , Sundays excepted. On Christmas, New Years, and other holidays, it is open one hour, from 9 to 10 a. m.

It is accessible for reading and consultation to every citizen. The following statutes and regulations of the trustees relate to the use of the library:

Revised Statutes, volume 1, part 1, chapter IX, title 8, *section* 6.—"It shall be the duty of the trustees to provide, in their regulations, that any member of the senate or assembly, during the session of the legislature, or during the sitting of the court for the correction of errors, or of the senate only, shall be permitted, under proper restrictions, forfeitures and penalties, to take to his boarding house, or private room, any book belonging to the library, except such books as the trustees shall determine are necessary always to be kept in the library as books of reference; but no member of the legislature shall be permitted to take or detain from the library more than two volumes at any one time.

Ibid., *sec.* 7.—"Before the president of the senate, or the speaker of the assembly, shall grant to any member a certificate of the time of his attendance, he shall be satisfied that such member has returned all books taken out of the library by him, and has settled all accounts for fines for injuring such books, or otherwise.

"The trustees hereby declare, agreeably to the provisions of the revised statutes, that the law library, in its most extensive sense, comprehends such books of reference as should always be kept in it; but during the session of the legislature, of the senate, of the court for the correction of errors, and of any court held in the capitol, law books may be taken from the library to any room in the capitol, to be returned on the same day. The librarian shall previously charge each person so taking with the book or books, and a fine of fifty cents shall be imposed for each day's detention beyond the above time. The regulations above ordained, as to loss, injury, or damage of books, shall apply in the present case.

"No books belonging to the law library are to be taken to the miscellaneous library to be read; nor are books, maps, charts, or prints, belonging to the miscellaneous library, to be taken to the law library to be read or examined."

The number of persons consulting the library is said to be very large, but it cannot be accurately stated.

The library is at present in the capitol. It is very inconveniently lodged. The rooms, too, are completely filled. The trustees and the governor of the State recommend the erection of a new building. From the spirit, good judgment and taste manifested in the general arrangements of the trustees, we are led to hope that they will not add yet another to the long and melancholy list of opportunities neglected for giving to the world the plan of a building *suitable* for a public library. The present librarian is Alfred B. Street.

The Assembly Library contains 6,000 to 8,000 volumes. "It is impossible for the librarian, or any one else, to tell the exact number, so long as they are kept in the present manner. All that can be crowded, two rows deep, upon the shelves in the clerk's room, are there. The rest are in the garret of the capitol. This library is increasing very rapidly." The select committee of the assembly on the library (from whose report the above extract is taken) recommend the providing of better accommodations for this collection. It should be remarked that this collection contains several copies of most of the public documents of the State. The number of different works is consequently much smaller than the aggregate number of volumes would seem to indicate.

The Library of the Young Men's Association—4,500 *vols.*—The Young Men's Association for Mutual Improvement, in the city of Albany, was founded on the 13th of December, A. D. 1833. "The plan originally contemplated, and which has been hitherto carried into successful operation, was to furnish, at the cheap rate of two dollars per annum, admission to a news and periodical room, in which all the leading journals and periodicals of the State and nation, and such foreign ones as were deemed proper, should be taken; the privilege of taking books from a library, to which additions are constantly being made of new and valuable publications; attendance upon popular lectures on literary and scientific subjects at least once a week during the winter months, and opportunities for debate during the same period. Such extended means of information, of so varied and practical a character, it is confidently asserted, were never before offered at so cheap a rate." [See introductory remarks to a pamphlet containing the charter, with the rules, &c., of the Young Men's Association in Albany, 1847.]

The association was incorporated by act of legislature, passed March 12, 1835.

The library contained (January, 1848) 4,015 volumes, valued at $3,726 26. There were added during the previous year, by purchase 370 volumes, by donation 24 volumes.

The following summary statement of the affairs of the association, taken from the annual reports of its presidents, from the time of its organization to 1847, is annexed to the pamphlet, before mentioned, containing the charter, &c.:

Year.	No. newspapers taken.	Other periodicals.	Volumes in the library.	Annual increase.	Number of members.
February, 1834	92	23	811	811	644
Do 1835	87	20	917	106	378
Do 1836	84	16	1,169	252	642
Do 1837	80	30	1,369	200	608
Do 1838	80	25	1,711	342	726
Do 1839	91	29	2,205	494	901
Do 1840	85	30	2,244	39	1,036
Do 1841	81	25	2,618	374	1,053
Do 1842	88	31	3,067	449	1,084
Do 1843	78	20	3,208	141	906
Do 1845	68	18	3,323	....	844
Do 1846	76	19	3,616	293	933
Do 1847	76	20	4,015	399	1,204

A catalogue of the library, classified with an alphabetical index, was published in January, 1848. It contains 103 pages 8vo. An earlier catalogue was printed in 1843 The librarian is A. F. Lansing.

Library of the State Normal School—6,858 vols.—In the report for 1846 of the executive committee of the State Normal School of New York, established at Albany in 1844, it is stated that "a donation for an educational library has been made to the Normal School, by the executors of the Hon. James Wadsworth, out of certain funds left by that distinguished friend of education, to be disbursed in such manner as would best promote the interests of the schools of the people." This valuable donation has been received, and composes the principal part of the "Miscellaneous Library."

"There are at present 745 volumes in the Miscellaneous Library. The Text Book Library numbers 6,113 volumes."—[Report January 12, 1849.]

With reference to the general character of the books, in the "First Quinquennial Register and Circular of the State Normal School, September, 1849," it is stated: "Besides an abundant supply of text books upon all the branches of the course of study, a well selected miscellaneous library has been procured, to which all the pupils may have access free of charge. In the selection of this library particular care has been exercised to procure most of the recent works upon education, as well as several valuable standard works upon the natural sciences, history, mathematics, &c. The State Library is also freely accessible to all. The library is under the charge of Mr. Webb, one of the teachers of the school, who deserves especial commendation for the care taken by him, in arranging and preserving the books. The Miscellaneous Library now numbers 783 volumes, showing an increase of 38 volumes since the last report. In the Text Book Library there are 4,338 volumes fit for use."—[Annual report for 1850.]

Library of the New York State Agricultural Society—600 *vols.*—This society was organized in February, 1832, and was incorporated the same year. It has gradually been collecting a library, composed mostly of agricultural works, pamphlets and periodicals During the last year (1848) about 100 volumes were added by purchase, and upwards of 100 by donation. The library is now much used, and the Executive Committee, in their report for 1848, urge that it should be so increased as to contain all the valuable works on agriculture, horticulture, &c., published in this and other countries, both for the benefit of the officers of the society, who are frequently called upon for information, and for the farmer and others interested in agriculture.

Library of the Albany Medical College—2,212 *vols.*—The books are most of them new and in good preservation. Their value is estimated at $5,900.—[Regents' report, 1850.]

Library of the Albany Institute—3,323 *vols.*—The Albany Institute was established in 1828. In 1832, the library consisted of 1,592 volumes, and the museum of 10,444 specimens in natural history. The library at present (1849) contains 3,323 volumes.

AUBURN.

Theological Seminary Library—6,000 *vols.*—This seminary was founded by the Presbyterians, and commenced operations in 1821.

BROOKLYN.

The Library of the United States Naval Lyceum—2,971 *vols.*—The lyceum was founded in 1833, and possesses a library of 2,971 volumes, 478 maps and charts, 531 coins, 49 medals, and 75 engravings. It is open daily from 8 o'clock a. m. to 3 p. m. Members of the lyceum may take books out of the library. Few, however, are taken out. The officers of the station resort to the library for reading. The library is at present under the charge of Dr. Thomas L. Smith, surgeon of the United States navy.

City Library—3,000 *vols.*—Founded and incorporated in 1839. The books (400) of the Hamilton Association have lately been purchased. The whole now occupy a part of the Free Library room of the Brooklyn Institute, but are not merged in the library of the institute. It is hoped that the City Library will be the nucleus of a large and valuable collection. A right in the library costs $25; annual assessment, $3. Persons not owning "rights" may enjoy the privileges of the library on paying $5 per annum. An alphabetical catalogue (80 pp. 8vo.) was published in 1841. The act of incorporation and by-laws are prefixed to the catalogue. The library is under the care of the institute, and no separate librarian is employed.

Youths' Free Library of the Brooklyn Institute—3,028 *vols.*—The institute was founded August, 1823; chartered September, 1824, by the name of the Apprentices' Library Association of Brooklyn; charter renewed April 13, 1843, and name changed to the Brooklyn Institute. The Free Library dates from 1828. The present rate of increase is from 200 to 500 volumes a year. The expenditure for books varies from $50 to $250 a year. Many books are annually worn out by constant use. There is at present no permanent fund for the increase of the library. A part of the rent of the institute rooms is devoted to that purpose. The sum of $5,000 is about to be invested as a permanent fund for the library. A building of granite and brick was erected for a lyceum, at an expense of $30,000. It was sold under mortgage, bought by an individual, and presented to the trustees expressly for a library. It is eighty feet long, fifty feet wide, and three stories high. Four catalogues have been printed since 1829; the last in 1849 (114 pp. 12mo.) The library is open three times a week, for three hours each time, for taking out books, and every evening for consultation. About 30,000 books are taken out each year. The librarians are volunteers, and frequently change.

"Minors of twelve years of age and upwards may have free access to the Youths' Free Library, Brooklyn Institute, subject to the following rules and regulations, viz:

1. "A guarantee will be required for the safe return of all books loaned.

2. "Each reader will be required to purchase a catalogue, at twenty-five cents. The numbers of the books wanted must be legibly marked on the card supplied for that purpose previous to coming to the library.

3. "Books may be returned every week, or kept out two weeks; if kept longer, they must be renewed, or the reader will be fined as follows: each quarto volume 12½ cents, octavo volume 6 cents, duodecimo volume 3 cents per week.

4. "Books lost, defaced, or injured in any way, by being torn, soiled, written in, or leaves turned down, such damage to be paid for by the reader as the librarian may deem proper. If a volume of a set be lost or injured, the whole set to be paid for.

5. "No conversation allowed among the readers in the room during the time of giving out books, and all disorderly conduct in or near the library will forfeit them the use of the books, and also the admission to the lectures. Readers are required to leave the room as soon as they have received their books.

6. "Books marked with an asterisk (*) shall not be taken from the library except by special permission.

7. "No reader can receive a book from the library until he shall have

paid all fines, and made good all damages he may have occasioned, and no book belonging to the library can be lent by the reader to any person out of the dwelling of the reader.

8. "The library will be open for girls every Thursday from 3 to 4 o'clock p. m; for boys every Monday and Saturday evenings—from May to November, from 7 to 9 o'clock; November to May, from 6 to 8 o'clock.

9. "Members of the institute may have the use of the library, subject to the above regulations."

BUFFALO.

Library of the Young Men's Association—6,500 *vols.*—This society was incorporated 3d March, 1837. It has (January, 1849) a library of 6,500 volumes, which is well selected and arranged, and contains many rare and valuable works. The collection in English and American history and literature is very full and valuable. Many of the editions are rare and costly. The library is increasing rapidly—say 400 volumes per annum. It is open daily from 8 a. m. to 9 p. m. There is a separate reading-room for newspapers and periodicals. Most of the leading reviews of the day are subscribed for. A lot of ground has been purchased in the city for the purpose of erecting thereon a suitable building for its purposes, and the executive committee are now engaged in raising the means to erect the same; the estimated cost of the lot and building being about $14,000.

The number of volumes drawn from the library during the past year (1848) is 14,200; being an increase of 3,600 volumes over the preceding year. Of the volumes thus read, 38 per cent. were works of fiction; 36 per cent. history, biography, travels, &c.; 17 per cent. standard literature; and 9 per cent. science.

The number of volumes drawn in each year since the foundation of the association is as follows: 1836, 5,500; 1837, 7,500; 1838, 6,300; 1839, 6,600; 1840, 6,400; 1841, 10,400; 1842, 11,100; 1843, 9,000; 1844, 8,000; 1845, 8,200; 1846, 9,250; 1847, 10,600; and in 1848, 14,200, as before stated.

In 1847 a handsome and convenient catalogue was printed, containing 146 pages 8vo., in two parts. "Part one comprises a complete descriptive catalogue of all books in the library at this date, (except novels and works in foreign languages,) with the names of the authors arranged alphabetically, the arrangement including the first and second letter of each name. All works published anonymously will be found under the head of '*anonymous.*' Part two is a catalogue of the titles of the works comprised in part one, classified according to subjects, and arranged alphabetically. Appended to the catalogue is a list of all works in the library published in foreign languages."

Of the last mentioned class there are but few books, and those mostly medical works in Latin.

Besides the library, the association possesses a cabinet of natural history, containing about 250 mineralogical and geological specimens, a catalogue of which is appended to the thirteenth annual report (1849.) The association also provides an annual course of lectures, free to members; others are charged 12½ cents each lecture. The annual reports are generally printed. The librarian is Phineas Sargent.

The Medical Department of the University of Buffalo possesses a library of 519 volumes, the estimated value of which is $800.—[Regents' report, 1850.]

CLINTON.

Hamilton College Libraries.—10,300 *vols.*—The College Library was founded with the college, in 1812, and contains about 3,500 vols. The average annual expenditure for books the last ten years has not exceeded $60. There is no permanent fund, except an income of $50 attached to the department of classical literature. The library room is about 75 feet by 20 feet, in the same building with the chapel. A catalogue was published soon after the college was organized, but it is now out of print. The library is opened on Wednesday and Saturday of each week, between the hours of 12 and 1 o'clock. All persons connected with the college—trustees, officers, and students—are allowed the use of the books gratuitously. Anson J. Upton, librarian.

The Union Society, formed in 1834, has a library of 3,400 vols. The triennial catalogue, printed at Utica in 1847, 55 pages 8vo., contains names of members, catalogue of the library and of the cabinet. The cabinet contains about 4,300 specimens, including minerals, shells, plants, birds, and objects of curiosity; about 250 rare and beautiful Chinese birds were collected for the purpose, and presented by Rev. Dr. Parker of China.

The Phœnix Society, formed ——, has a library of 3,400 vols. The triennial catalogue, published in November, 1847, 61 pages 8vo., contains the names of members, catalogue of books, and of articles in the cabinet.

EAST HAMPTON.

Library Company—563 *vols.*—This library was founded by Dr. Lyman Beecher, in the year 1803, and has been a useful institution. It increases slowly from the proceeds of assessments. Sylvanus Jones, librarian.

FLUSHING.

St. Paul's College Library.—2,800 vols.

FORDHAM.

St. John's College Library, and St. Joseph's Seminary Library—9,500 *vols.*—These two libraries (founded in 1840,) though distinct, are under the same management. St. John's College Library contains 5,500 vols., St. Joseph's Seminary Library 4,000. The latter possesses an illuminated manuscript of the bible, probably of the fourteenth century; the first four pages missing. About 4,000 volumes of the St. John's College Library have been received within the last three years, by donations and the transfer of the library of another institution. This library occupies two rooms—one circular, (18 feet in diameter,) the other oblong, 18 by 30 feet; the books are arranged according to subjects. St. Joseph's Library occupies a room 15 by 30 feet. It contains only works in divinity and kindred sciences. The catalogue is well kept in a folio manuscript, but has not been printed. The libraries are opened daily from morning till night. The faculty and students are allowed the use of the books gratuitously;

books are lent to others on application, when there is prospect of their safe return. Rev. I. Legouais, librarian.

GENEVA.

Geneva College Libraries—6,429 *vols.*—The library commenced with the college, in 1825, and contains about 2,000 vols. and 1,600 pamphlets; and increases at the rate of 70 or 80 vols. yearly, most of which are gifts. A very imperfect catalogue, now out of print, was published some years ago. There is no regular time of opening the library. There is also a library, founded in 1835, connected with the medical department; it contains about 600 volumes, valued at $1,500. A society of under graduates of the college (the Hermæan Society) possesses a library of 3,669 volumes, to which additions are annually made from the proceeds of a tax upon the members. From this library the students are mostly supplied with books, though they are allowed to use the College Library without charge. The Hermæan Library is opened daily for an hour. Joseph M. Clark, A. B, tutor and librarian of the College Library.

HAMILTON.

Madison University Libraries—7,000 *vols.*—This institution was established in May, 1820, by the Baptist Education Society of the State of New York. It was called, till within two or three years, the Hamilton Literary and Theological Institution. "One principal object aimed at by the early conductors of the institution, was to lay the foundation of a good library. Many of the first donations were received in books, and at the end of the seventh annual report we find a 'list of books, &c.' from which we learn that the library contained 450 volumes." [See History of the Hamilton Institution, by Professor J. H. Raymond, in the American Quarterly Register for February, 1843.] Most of the library is owned by the Baptist Education Society of the State of New York. A small portion is owned by the University board. It was begun in 1822, though, for many years, scarcely any additions were made, except by occasional donations, and those small. It contains, at present, 4,900 vols. The books are arranged according to subjects, particular portions of the room being assigned to a particular class, as classical literature, sacred philology, church history, modern languages, &c. Within each section the books are arranged according to their size. There is no printed catalogue. The library is opened for consultation every day at 1½ o'clock, and is kept open until 4 o'clock, except Saturday. Books are drawn three times a week. The students are entitled to the use of the library by the payment of 25 cents per term; the board of trustees, faculty, and clergymen of the place, gratuitously. Books are always lent by the librarian to gentlemen of responsible character who desire them. Books are thus occasionally lent to persons at a considerable distance. Professor A. C. Kendrick, librarian.

Students' libraries, 2,100 volumes.

HARTWICK.

Theological Seminary Library—1,000 *vols.*—This is a Lutheran institution, and was incorporated in 1815.

HUDSON.

The Franklin Library—1,058 *vols.*—The Franklin Library Association was incorporated in April, 1838. Its library contains 1,058 volumes. It has also a philosophical apparatus. The library is open every Saturday evening from 7 to 9 o'clock. The members pay two dollars a year for the use of the library, and for all the privileges of the institution. The executive committee have power to extend the use of the library to others. During the summer, about 35 books per week are lent out; during winter, about 70 per week. J. C. Newkirk, corresponding secretary. A catalogue, with the by-laws, was printed in 1849, containing 21 pp. 12mo.

NEWBURG.

Library of the Theological Seminary of the Associate Reformed Church—3,230 *vols.*—This seminary was incorporated in 1835. The library of the Associate Reformed Church was founded in 1802, and contains 3,230 volumes, and some manuscripts. The only considerable accession during the last ten years was the donation of the Rev. R. Forrest, containing 855 volumes. A catalogue, 16 pages 8vo., was printed in 1848. The library is open for one hour on Thursday of every week in term time, and the use of it is free to all persons connected with the institution. H. Connelly, librarian.

NEW YORK CITY.

Mercantile Library Association—31,674 *vols.*—Founded in 1820. The library contained January 1, 1850, 31,674 volumes; a respectable cabinet of specimens in geology and mineralogy; also a small collection of curiosities, belonging to the association. The yearly average number of volumes added to the library, for the last ten years, is 1,561. The yearly average expenditure for books, during the same period, is $2,126 58. A brick building was erected for the association in 1830, at a cost of $53,000. It is 50 feet by 90 feet. The rooms appropriated to the use of the association are upon the 2d and 3d stories. The library, lecture room, and directors' room, are on the 2d floor; the reading-rooms and conversation room on the 3d floor. There is no systematic arrangement of the books according to subjects. The books are placed in alphabetical order, separating languages and fiction, and dividing according to size. The alphabetical arrangement has been adopted solely on account of its practical convenience. Catalogues were printed as follows: 1st, in 1825, in 12mo.; 2d, in 1828, in 12mo.; 3d, in 1830, in 8vo.; 4th, in 1834, in 8vo.; 5th in 1837, prepared by Edward Johnston, esq., in 8vo., and supplement in 1840; 6th, alphabetical, with a classified index, in 1844, 300 pp. 8vo.; another is in preparation. The library is open every day from 10 o'clock a. m. to 10 o'clock p. m., except Sundays and holidays. Merchants' clerks are entitled to the use of the library, on subscribing the constitution and paying an initiation fee of $1, and $1 for the first six months. Merchants and others are admitted on the payment of an annual subscription of $5, but are not eligible to office. More than 75,000 volumes are lent out annually! About 6,000 persons annually consult the library without taking away books. S. Hastings Grant, librarian.

From reports of the directors we gather the following additional facts:

"The first public meeting of merchants' clerks, for the purpose of considering the expediency of establishing a library and reading-room, was held on the 9th of November, 1820. A subsequent meeting was held on the 27th of the same month, at which a constitution was adopted, and the first officers elected. An appeal was made to the public for money and books; and clerks were invited to become subscribers. The library was opened February 12, 1821, in a room at No. 49 Fulton street, and contained, at that time, 700 volumes. The number was increased before the year expired to 1,000 volumes. The number of subscribers was 175.

"The institution, during the early years of its existence, encountered a good deal of hostility from a class of short-sighted and narrow-minded merchants, who fancied their clerks could not devote their whole souls to their business if they were allowed the recreation which the library furnished. In 1825 special efforts were made to sustain and increase the usefulness of the institution; within six months, more than 200 additional members were obtained, and subscriptions of money were raised to the amount of $795, besides many valuable books. During this year the first catalogue was issued. The next year,1826, the library was removed to more spacious apartments in Cliff street, and a reading-room was established.

"In 1827 lectures were established, which have since become one of the most popular and useful parts of the plan of the establishment. In February, 1828, at a meeting of prominent merchants, interested in the success of the institution, it was agreed to raise, by subscription, a sum sufficient for the erection of a building for the permanent accommodation of the library. The contributors formed themselves into a company called the Clinton Hall Association. The sum of $33,500 was raised during the year in sums varying from $1,000 to $100. A building was erected on the corner of Beekman and Nassau streets, and, under the name of Clinton Hall, was dedicated on the 2d of November, 1830, with appropriate ceremonies, to literature, science, and the arts. The entire cost of the land and building was about $55,000. This left an indebtedness of $21,500, secured by a mortgage which has been gradually reduced to $4,000, which the net income of two years, arising from rents of rooms not occupied by the association, will more than cancel. The Clinton Hall Association stands in the relation of guardian to the Mercantile Library Association; the latter being assured of a full and perpetual ownership in the building as effectually as if the title were in its own coporate name. On the removal of the library to the new building, it numbered 6,000 volumes.

"In 1830 the trustees of Columbia College conferred upon the institution two scholarships, and in 1848 the University of the city of New York placed two foundations at the disposal of the directors of the association.

"The class department originated with the board of 1838, and has been in active operation every succeeding year. Up to January, 1850, 1,281 members have received instructions in the following branches: French language, 629; Spanish, 173; German, 93; Italian, 11; book-keeping, 125; penmanship, 89; chemistry, 48; music, 48; elocution, 43; drawing, 11; mathematics, 11."

The twenty-ninth annual report, presented January, 1850, contains the following table, exhibiting—

Annual additions of members and books, expenditures for books, total receipts, &c., from the 9th of November, 1820, *to* 1st *January,* 1850.

Years.	Members admitted.	Volumes added.	Expended for books.	Expended for binding.
1820 } 1821 }	204	1,000	$600 00	......
1822	76	250	150 00	......
1823	81	100	273 00	......
1824	77	175	208 00	......
1825	257	675	619 00	$73 00
1826	471	1,000	756 72	190 28
1827	360	1,200	695 12	31 38
1828	295	1,000	330 27	146 25
1829	414	600	562 30	154 28
1830	486	600	567 91	99 25
1831	507	750	1,177 19	68 44
1832	383	864	1,107 36	197 55
1833	382	1,397	1,303 98	224 20
1834	393	1,090	1,278 20	223 29
1835	680	1,522	2,126 32	238 51
1836	867	1,845	2,286 74	250 70
1837	936	2,547	2,806 47	186 04
1838	1,003	2,471	3,115 72	423 91
1839	1,097	3,583	4,278 23	729 60
1840	501	390	1,995 19	615 42
1841	627	1,136	1,495 12	591 75
1842	308	1,252	2,179 79	670 77
1843	252	465	797 90	536 85
1844	387	745	708 35	271 25
1845	582	1,428	1,628 60	402 65
1846	609	1,883	2,072 59	500 34
1847	687	2,258	3,311 95	549 19
1848	681	2,276	3,392 71	445 52
1849	1,013	2,517	3,531 83	600 35
	14,616	37,019	45,356 56	8,420 77

The directors add: "This account does not show the full value of our literary property. The donations of books, in a period of 29 years, are worth several thousands of dollars. There has been, it is true, a loss by wear and decay of some 6,000 volumes, but these are mainly of trifling value, consisting chiefly of novels, not deemed worthy the expense of rebinding, even in the cheap style necessary to their preservation. Most of the standard books originally purchased or presented, are still preserved in good order."

The institution has lately received a legacy of $3,000 from Miss Elizabeth Demilt, said to have been the first bequest ever made to this library.

The New York Society Library—35,000 vols.—(346 and 348 Broadway.) The trustees of the New York Society Library were incorporated the 2d of April, 1754. The establishment was engrafted upon the "Public Library of New York," founded in 1700. (See Grahame's United States' Minutes of the Common Council of New York, &c.) Grahame says, "a library was founded under the government of Lord Bellamont, in 1700."

A copy of Clarendon's History of the Rebellion, marked "Public Library of New York, 1811," is now in the Society Library.

In 1729 the Rev. Dr. Millington, rector of Newington, England, bequeathed his library to the society for the Propagation of the Gospel in Foreign Parts. By this society the library of Dr. Millington was presented to the corporation of the city, for the use of the clergy and gentlemen of New York, and the neighboring provinces. The New York Society Library was founded in the year 1754, having for its object, as expressed in the original articles of association, "the use and ornament of the city, and the advantage of an intended college."

Smith's History of New York thus adverts to the subject: "In 1754 a set of gentlemen undertook to carry about a subscription towards raising a public library, and in a few days collected near 600 pounds, which were laid out in purchasing about 700 volumes of new, well chosen books," &c.

The library of the corporation above alluded to, appearing to have been mismanaged, and at length entirely disused, the trustees of the New York Society Library offered to take charge of it, and to deposite their own collection with it in the City Hall. This proposal having been acceded to by the corporation, the institution thenceforward received the appellation of "The City Library"—a name by which it was commonly known for a long time.

On this foundation the library increased and prospered. In 1772 a charter was granted to it by the colonial government, and the official style of "The New York Society Library" was adopted. The war of the Revolution, however, which soon after occurred, interfered with these pleasing prospects. The city fell into the possession of the enemy. The effect on all our public institutions was more or less disastrous, and to the library nearly fatal. An interval of no less than fourteen years here occurs in the history of the society. At length it appears from the minutes, that "the accidents of the late war having nearly destroyed the former library, no meeting of the proprietors for the choice of trustees was held from the last Tuesday of April, 1774, until Saturday, 21st December, 1788, when a meeting was summoned, and the operations of the society were resumed. In 1789 the original charter was revived, and the society commenced almost a new collection of books. In 1793 a building was begun for the library in Nassau street. In this year the first catalogue of the books, with the charter, names of members of the society, &c., was printed, in 99 pp. 8vo. The library is said to have contained, at this time, 5,000 volumes. In 1813 the second catalogue was published. The library then comprised about 13,000 volumes. In 1825 a supplement was published. The library then contained about 16,000 volumes. In 1836 the trustees sold the property in Nassau street, and purchased a lot in Broadway, on which they have erected the present edifice.

In 1838, when the last catalogue was printed, the library contained 25,000 volumes.

In the year 1849 the society received a bequest of $5,000 from Miss Demilt.

The library at present (1850) contains 35,000 volumes, a few manuscripts of modern date, maps and charts of great value, a few sheets of ancient church music on vellum, numerous collections of engravings, a small but beautiful collection of bronze medals, one set of casts of the Elgin marbles, forty eight in number, and one set of Waterloo medals, fifty in number. About one thousand volumes are annually added to the library. About two thousand dollars per annum are expended for the purchase of books. There is no permanent fund. The rents of the building, the annual payments and some minor sources, afford about nine thousand dollars annually. The debt, however, is large, and leaves but a limited sum for increase. The persons employed in the service of the library are a librarian, assistant, room keeper, janitor, and a boy. A building was first erected for the library in 1794, previous to which the library was kept in the old City Hall. The present edifice was erected expressly for the library in 1838–'39, at an expense of forty seven thousand dollars for the land and seventy thousand dollars for the building and furniture. The material is brick, with façade and basement, &c., of brown freestone. It fronts on Broadway 60 feet, and extends back 100 feet of uniform width. The principal floor is divided into two large and two small rooms. There is a lecture-room below and a picture-gallery above. The arrangement of the books upon the shelves is according to subjects, "but with as many analogous subjects united as possible, in order to avoid the necessity of a complicated distribution in restoring continually the volumes returned, to their places."

Catalogues of the library are known to have existed before the Revolution, but the dates of their publication are not ascertained. Besides the catalogues of 1793, (99 pages 8vo.) 1813, and supplement 1825, (135 pages 8vo.,) a catalogue was printed in 1838, containing 328 pages 8vo., a supplement in 1841 of 72 pages, and another in 1843 of 24 pages. A new catalogue with the following title has just been published: "Alphabetical and analytical Catalogue of the New York Society Library, with the charter, by laws, &c., of the institution, 8vo.: New York, 1850" Prefixed to the catalogue are a history of the library; the articles of subscription, 1754; the charter, 1772; acts of legislature, by laws, names of trustees since 1754, and librarians since 1793; alphabetical catalogue, 491 pages; catalogue of the Winthrop library. (This ancient and curious collection of books was presented by the late Francis B. Winthrop, esq. They were the property of his distinguished ancestor John Winthrop, the founder of Connecticut. It contains about 275 volumes.) An analytical index of 112 pages follows the catalogue. This laborious and valuable work was prepared by Mr. P. J. Forbes, the present librarian. It is very handsomely printed.

The library is open daily, Sundays excepted, from 8 a. m. till sunset; but the reading rooms are open till 10 p. m.

Persons entitled to the use of the library are, members who pay $25 for a right, and then $6 annually, and temporary subscribers at $10 per annum. Strangers may be introduced, for the use of the books, &c., in the rooms, for one month. The number of members in 1793 was nine hundred. The present number is eleven hundred.

Books are lent out, with the exception of very expensive works—those of reference, as encyclopædias, dictionaries, bound newspapers, &c. About 2,000 volumes (nearly 8,000 works) were charged in eight months. About 1,500 persons a year consult the library without taking away books. The trustees have full power to extend the use of the library to persons at a distance. Philip J. Forbes, librarian.

Astor Library—20,000 *vols.*—One of the noblest gifts to learning, of which any city can boast, is that for which not only New York, but this whole country, owes a debt of lasting gratitude to the memory of John Jacob Astor. The munificence of the endowment is only equalled by the judicious, enlightened, and liberal provisions made for its usefulness and perpetuity. Mr. Astor died in 1848.

The Astor Library was endowed by the third codicil to his will, which was dated August 22, 1839, and is in these words:

"I, John Jacob Astor, do make this additional codicil to my last will, bearing date the 4th day of July, in the year of our Lord 1836.

"Desiring to render a public benefit to the city of New York, and to contribute to the advancement of useful knowledge and the general good of society, I do, by this codicil, appropriate *four hundred thousand dollars* out of my residuary estate to the establishment of a public library in the city of New York.

"For this purpose, *I give to my executors four hundred thousand dollars*, to be taken from my personal estate, or raised by the sale of parts of my real estates, to be made by my executors, with the assent of my son, William B. Astor, upon condition and to the intent that the said amount be settled, applied, and disposed of as follows, namely:

"1. In the erecting of a suitable building for a public library.

"2. In furnishing and supplying the same from time to time with books, maps, charts, models, drawings, paintings, engravings, casts, statues, furniture, and other things appertaining to a library for general use, upon the most ample scale and liberal character.

"3. In maintaining and upholding the buildings and other property, and in defraying the necessary expenses of taking care of the property, and of the accommodation of persons cousulting the library.

"The said sum shall be payable one third in the year after my decease; one third in the year following; and the residue in equal sums, in the fourth and fifth years after my decease.

"The said library is to be accessible, at all reasonable hours and times, for general use, free of expense to persons resorting thereto, subject only to such control and regulations as the trustees may from time to time exercise and establish for general convenience.

"The affairs of the institution shall be conducted and directed by eleven trustees, to be from time to time selected from the different liberal professions and employments in life, and the classes of educated men. The mayor of the city of New York, during his continuance in office, and the chancellor of the State of New York, during his continuance in office, shall always be trustees. The vacancies in the number of trustees occurring by death, resignation, incapacity, or removal from the State, shall be filled by persons appointed by the remaining trustees. The acts of a majority of the trustees, at a meeting reasonably notified, shall be valid.

"All the property and effects of the institution shall be vested in the said trustees. They shall have power to direct the expenditure of the funds, the investment, safe-keeping, and management thereof, and of the property and effects of the institution; also, to make such ordinances and regulations, from time to time, as they may think proper, for the good order and convenience of those who may resort to the library, or use the same; also, to appoint, direct, control, and remove the superintendent of the library and all librarians, and others employed about the institution; and, also, they shall have and use all powers and authority for promoting the expressed objects of this institution, not contrary to what is herein expressed.

They shall not receive any compensation for their services, except that if any one of their number shall at any time be appointed superintendent, he may receive compensation as such.

"The trustees shall be subject to the visitation of the proper courts of justice, for the purpose of preventing and redressing all mismanagement, waste, or breach of trust.

[By a subsequent codicil the testator authorized the trustees to select a site on the east side of Lafayette Place, to contain 65 feet front and rear, and 120 feet deep.]

"I further direct, that a sum not exceeding seventy-five thousand dollars may be expended in the erection of a building for the library; one hundred and twenty thousand dollars may be expended in the purchase of books and other objects for the establishing of the library; and the residue shall be invested as a fund for the maintaining and gradually increasing of the library.

"All investment of the funds of the institution shall be made in the public debt of the United States of America, or of the States of the Union, or of the city of New York, as long as such subjects of investment may be had, giving a preference according to the order in which they are named. And in case the income of the fund shall at any time exceed the amounts which the trustees may find useful to expend for the purposes above named and particularized, they may expend such surplus in procuring public lectures to be delivered in connexion with the library, upon useful subjects of literature, philosophy, science, history, and the fine arts, or in promoting in any other mode the objects of the institution, as above expressed. I direct my executors to cause and procure the necessary legal assurances to be made for establishing and securing the application of the funds and property hereby appropriated for the purposes of these presents, and in the mode herein pointed out. And it is my request that the trustees would apply to the legislature of this State for such acts as may fully secure, establish, and perpetuate this institution, and render its management easy, convenient, and safe, both to themselves and the public. And as this property is devoted wholly to public purposes, I trust that the legislature will so far favor the institution as to exempt its property from taxation. And, as a mark of my respect to the following gentlemen, I name them to be the first trustees: that is to say, the mayor of the city of New York and the chancellor of the State for the time being, in respect to their offices; Washington Irving, W. B. Astor, Daniel Lord, junior, James G. King. Joseph G. Cogswell, Fitz Green Halleck, Henry Brevoort, junior, Samuel B. Ruggles, and Samuel Ward, junior.

[By a further codicil the testator appointed Mr. Charles A. Bristed one of the trustees; and also authorized the funds of the library to be invested in bonds, secured by mortgaged improved real estates.]

"In witness whereof, I have set my hand and seal to this codicil, and publish the same as a codicil to my will, this twenty second day of August, in the year of our Lord one thousand eight hundred and thirty-nine.

"JOHN JACOB ASTOR. [L. S.]"

The Trustees of the Astor Library were incorporated by the legislature of the State, 18th January, 1849. The act of incorporation corresponds in all respects with the provisions of Mr. Astor's will, with the following additional provisions:

"The property, real and personal, of the said corporation, shall be exempt from taxation in the same manner as that of the other incorporated public libraries of this State; and it shall be the duty of the said trustees to effect such insurances as can be obtained upon said buildings and library, and other property, against loss by fire or otherwise, and pay the expenses thereof out of the fund described in the fourth subdivision of section second of this act.

"The said trustees shall, in the month of January in every year, make a report to the legislature for the year ending on the 31st day of December preceding, of the condition of the said library, of the funds and other property of the corporation, and of its receipts and expenditures during such year.

"If any debts of the said corporation, lawfully contracted, shall not be paid out of its funds, when due, the trustees shall be individually liable for such funds, to the creditors in such cases, and to such extent as they would be if not incorporated."

From the "Literary World" (September 22, 1849) we take the following description of the building now in progress for the Astor Library. This account was originally published in the New York "Journal of Commerce":

"It will be built in the Byzantine style, or rather in the style of the royal palaces of Florence, and consequently will present a strongly imposing appearance, both in its external and internal structure. Its dimensions will be 120 feet in length by 65 wide, and from the level of the side-walk to the upper line of the parapet its height will be 67 feet; built of brown cut stone, and brick; very little wood will enter into its composition. We are informed that no building in the United States, of this character, will be formed to such a large extent of iron. According to the estimates, the iron-work will form one of the heaviest expenditures. Its uses, too, will be altogether novel, at least in this country, and ingenious. For instance, the truss beams, supporting the principal weight of the roof, will be constructed of cast-iron pipes, in a parabolic form, on the same plan with the iron bridges in France and other parts of Europe, with a view to secure lightness and strength.

"The library hall, which will occupy the second floor of the edifice, will be a truly elegant apartment, 100 feet in length by 60 wide in the clear. The ascent from the front will be by a single line of thirty-eight Italian marble steps, decorated on either side at the entrance by a stone sphinx. Upon nearing the summit of these steps the visitor finds himself near the centre of this immense alcove, surrounded by 14 brick piers, plastered and finished in imitation of Italian marble, and supporting iron galleries midway between the floor and the ceiling. The side walls from 'pit to dome' form one continuous shelving of a capacity sufficient for 100,000 volumes. This is reached by means of the main gallery, in connexion with which are four iron spiral stairways, (one from each corner of the building,) and an intervening gallery of a lighter and smaller description, also connected by its staircases, eight in number, with the main gallery. The whole are very ingeniously arranged, and appropriately ornamented in a style corresponding with the general architecture of the building. At an elevation of 51 feet above the spectator is the principal sky-light—54 feet long by 14 broad, and formed of thick glass set in iron. Besides this are circular side sky-lights of much smaller dimensions. All needful light is thus furnished, in connexion with the windows in the front and rear walls. Free ventilation is also had by means of iron fret-work inserted in suitable portions of the ceiling. In the extreme rear are the two librarians' rooms, to which access is had by means of the main galleries.

"The first floor will contain the lecture and reading rooms, with accommodations for 500 persons. The latter are located on each side of the building, and separated from the library hall stairway at the front entrance by two corridors leading to the rear vestibule, and from thence to the lecture room, still further in the rear. The basement contains the keeper's rooms, cellars, coal vaults, hot-air furnaces, &c. The floors are composed of richly wrought mosaic work, resting on iron beams.

"The library building in its exterior, especially as seen from the street, will present an appearance at once grand and imposing. The basement story will be faced with high rustic ashler, projecting six inches, thus imparting an extremely bold relief. The window frames are placed near the inside line of the wall, forming deep recesses, in order to secure the same effect. These consist primarily of six, occupying the central portion and admitting light to the library hall, placed three above and three below a given point—the upper connected with the lower by columns supported by figures representing the genii of literature. Between these sets of windows is inscribed 'Astor Library, 1849.' The remaining windows are two in number, one on either side of the entrance, and connected with the lecture room.

"The amount authorized to be expended in the erection of the building is $75,000, and the contract is made within this sum—of course, exclusive of furniture and shelving. The latter will cost probably $8,000. Two years it is expected will be required to complete it. The architect is Mr. Alexander Saeltzer, from Berlin, a pupil of the celebrated Schinkel. The entire appropriation for the library and building is $400,000, of which about one-half is to be funded for the benefit of the library, thus insuring to it a perpetuity such as similar institutions but seldom possess. Through the efforts of Mr. J. G. Cogswell, in England and on the continent, about 20,000 volumes have been collected, and are now in his keeping at No. 32 Bond street, where they are accessible to visitors, though the public are not generally aware of the fact."

The excellent management of this admirable institution is, we presume, mainly due to the learning, energy, and practical good judgment of the librarian, Joseph Green Cogswell, LL. D. At his suggestion an early appropriation was made for the purchase of books, at a time when the revolutions of Europe offered the best opportunity that has ever occurred to buy books cheap. The result is seen in the opening of the library with a superb collection of 20,000 volumes, purchased at probably one-half, or perhaps one-quarter of the price that they would have commanded at other times.

Library of the New York Historical Society—17,000 *vols.*—This society was founded in 1804: incorporated in 1809. Its library (January 4, 1849) contained:

Printed books and pamphlets - - -	15,000
Bound volumes of newspapers - -	1,395
MSS., original letters, papers, &c. - -	15,000
Maps and charts - - - - -	2,100
Engravings, several hundred—say - -	400

Medals, about	200
Coins, about	1,400

Also an extensive collection of Indian relics, curiosities, &c.; also, a collection of portraits, busts, &c.

As nearly all the additions are from donations, it is difficult to ascertain, from the records, the yearly average increase. The number added during the year 1848, (printed books and pamphlets,) was 1,290. From one to two hundred dollars are annually expended for the purchase of books. The society has no funds; the library is supported by annual subscriptions of its members. The society occupies leased rooms in the University of the city of New York. A catalogue, prepared by Rev. Timothy Alden, and the only one printed, was published in 1813, 139 pp. 8vo. A complete catalogue has recently been prepared, and is soon to be put to press. The library is open daily from 10 until 2 in the morning, and from 4 to 6 in the evening, in summer, and from 7 to 9 in winter. Members of the society, and persons introduced by members, are entitled to the use of the books. Books are only to be consulted in the library. The yearly average number of persons consulting the library is estimated at five hundred. Jacob B. Moore, librarian.

Since the above account was written, Mr. J. B. Moore has been appointed postmaster in San Francisco, and has left his charge in New York. His son, George H. Moore, has succeeded him as librarian. The sum of thirty-five thousand dollars has already been obtained for the erection of a suitable building for the meetings of the society, and the preservation of its valuable collections. Of this sum, five thousand dollars were from a bequest of Miss Elizabeth Demilt, of New York, received in 1849. Mr. James Lenox subscribed five thousand dollars.

Library of the Union Theological Seminary—17,000 *vols.*—The library of this institution was founded in 1838. It is sometimes called, by courtesy, "The Van Ess Library," as having been purchased of the Rev. Leander Van Ess, of Germany. It contains about 17,000 volumes, mostly theological. About 700 volumes were added in 1847 by gift, and others occasionally in like manner. The average annual increase cannot be stated. The library occupies a hall in the seminary building, No. 9 University Place. The room is a parallelogram, about 65 feet in length, much broken by windows and badly contrived. The books are arranged on the shelves according to size. There is only a MS. catalogue. The library is opened each week day, except Saturday, from 10 o'clock a. m. to 3 or 4 p. m.; closed from the 3d Wednesday in June to the 3d Wednesday in September. Persons entitled to the use of the library are: all connected with the seminary, and those who may have permission from a professor. The books are lent out. Of the number no estimate can well be made. Rev. Edward Robinson, D. D., librarian.

Columbia College Library—12,740 *vols.*—Columbia College received its charter in 1754. The library was founded about the year 1757. About this time Mr. Joseph Murray "bequeathed to the college property worth about £8,000, including his library." Rev. Dr. Bristowe, of London, also bequeathed his library of about 1,500 volumes. From these sources, from purchases, from presents by the Earl of Bute and others, and from the University of Oxford, the college was in possession of a considerable library; when, on the 6th of April, 1776, the treasurer of the college was ordered to prepare it in six days for the reception of troops. "The students were in consequence dispersed, the library and apparatus were deposited in the City Hall or elsewhere, and the college edifice was converted into a military hospital. Almost all the apparatus, and a large proportion of the books belonging to the college, were wholly lost to it in consequence of this removal; and of the books recovered, 600 or 700 were so only after about thirty years, when they were found, with as many belonging to the New York Society library, and some belonging to Trinity Church, in a room in St. Paul's chapel, where, it seemed, no one but the sexton had been aware of their existence, and neither he nor anybody else could tell how they had arrived there." [See Moore's Historical Sketch of Columbia College, page 62.] In 1792 "a large addition to the College Library was made by a grant of money obtained from the legislature. In 1813 the college purchased the library of Professor Kemp. In 1838 it purchased the library of Professor Moore, who was 'employed for about a year in making a new arrangement and a catalogue of the whole library.'" The library contains (1849) 12,740 volumes, exclusive of pamphlets, which, if bound, would form about 500 volumes more. A single Egyptian papyrus, several volumes of engravings, a series of 48 bronze medals illustrative of the Elgin marbles, and two marbles bearing Greek inscriptions, though of little interest, belong to the library. About 120 volumes have been added annually for the last ten years, and about $200 expended annually for the purchase of books. The library room is 44 feet by 26; and has, both on its lower floor and gallery, five alcoves on each side, lighted by as many windows. There is no printed catalogue. The library is opened twice a week while the college is in session, and from one to three o'clock p. m. each time. The officers of the college and the students of the three higher classes use the library, and without charge. Books are lent out, about six hundred annually. The yearly average number of persons consulting the library without taking out books is about one hundred and ten. Lefroy Ravenhill, librarian.

The Apprentices' Library—14,000 *vols.*—The General Society of Mechanics and Tradesmen (Nos. 32 and 34 Crosby street) was founded A. D. 1785. The Apprentices' Library, established in 1820 by this society, contains about 14,000 volumes, kept for the gratuitous use of the apprentices of the city. [New York State Register, 1845, page 319.]

Library of the Theological Institute of the Episcopal Church—10,000 *vols.*—The American Almanac, for 1850, gives the date of the foundation of this institution as 1817, and states the number of volumes in its libraries to be 10,000.

Library of the New York Hospital—6,000 *vols.*—The Society of the New York Hospital, New York city, was founded in 1770, and incorporated June 13, 1771. The following account of its library is taken from a pamphlet, published in 1846, containing the charter, laws, &c., of the society, and of the Bloomingdale Asylum, page 68:

"Upon the recommendation of the medical faculty of Columbia College, the governors of the hospital, in August, 1796, appropriated the sum of $500 towards the purchase of a *medical library*, to which the members of that faculty contributed books from their private libraries, and part of their fees of public instruction. A hospital library was thus instituted, which was further augmented by the purchase of the medical library of the late

Dr. Romayne, in 1800, and by the accession, in 1805, of the library of a private association of physicians, then called 'The Medical Society of New York,' who gave their books on condition that they, and such of their sons as should become practitioners of medicine in the city of New York, should have free use of the hospital library. In 1805 the governors appropriated the annual sum of $250 for the purchase of books; and other larger additions were afterwards made to it, by special purchases and donations from time to time, amongst which was the valuable botanical library of Dr. Hosack, bought by the hospital.

"For some years past there have been appropriated for the support and increase of this library all the proceeds arising from the sale of tickets to students of medicine, which permit them to see the practice of the house, to attend the clinical instruction, and to take books from the library. The moneys thus accruing are appropriated to the purchase of medical and scientific publications, selected by the library committee, (composed of three governors, one physician, and one surgeon,) to the payment of the librarian's salary, binding, and other contingencies.

"The annual average expenditures and receipts on account of the purchase of books, are now from $500 to $800.

"The library now consists of more than 5,000 volumes, confined entirely to medicine and surgery, and those collateral branches of science (as chemistry, botany, &c.) specially connected with the healing art. It is believed to be as useful and complete in this department as a library can be made in that number of volumes, and contains many of the most splendid and costly works on anatomy and natural history. During the last year the governors have fitted up, in the large hospital building, two spacious apartments, one above the other, communicating by a central spiral staircase, and deposited the library in them, the lower room being used as a reading and consultation chamber."

Books may be lent free of charge to the present or former governors, physicians, surgeons, apothecaries, and other officers of the hospital; to all donors of books (approved by the library committee,) or money to the amount of $25; and to other persons on the payment of $5 a year.

A catalogue of the books (194 pages 8vo.) was published in 1845. It is very well prepared. It is alphabetical, with an alphabetical and analytical index. The present librarian is John L. Vandervoort.

Library of the American Institute—6,000 *vols.*—"The American Institute of the city of New York was organized January, 1828; incorporated May 2, 1829; for the purpose of encouraging and promoting domestic industry. The library contains about 6,000 volumes, mostly works of reference for the mechanic, the manufacturer, the farmer, and the statesman. It is open, free of expense to all strangers and is conducted on more liberal principles than any other library in our country." [New York State Register, 1845, page 320.]

Library of the New York Law Institute—4 424 *vols.*—The New York Law Institute was incorporated February 22, 1830. Its library, composed almost exclusively of law books, contains (1850) 4,424 volumes. Its average increase is about 225 volumes a year. From the commencement of the institution to 1850, the sum of $21,894 had been expended for books, making a yearly average of $1,094 70. The annual income, varying from $1,200 to $1,500, is derived from charges for membership, ($80 for each member.)

The corporation of the city at present furnishes two rooms in the City Hall for the accommodation of the institute. The one used for the library is 50 feet by 56. The conversation room is 18 by 33.

A catalogue was published in 1842, containing 120 pages 8vo. This catalogue, prepared by Lewis H. Sanford, contains also "a chronological list of contemporary English reporters." The library is open daily from 8½ o'clock a m. to 6 p. m. Only those members of the New York bar who belong to the institute are entitled to the use of the books; but those who do not practise law in the city, Kings county, or Jersey City, and strangers generally, are permitted to use the library free of charge. No book is allowed to be taken out of the library except to be used in the different courts in the City Hall. The present librarian is H. S. Dodge, 54 Wall street.

Libraries of the University of the city of New York—4,000 *vols.*—This institution was founded in 1831.

In the American Almanac for 1850 the number of volumes is stated as above. In the report of the regents of the New York University, for 1850, the value of the library of the university is stated to be $7,000.

The Library of the Mechanics' Institute—3,000 *vols.*—The Mechanics' Institute of New York, 105 Bowery, New York city, was founded in the winter of 1830–'31, and incorporated April 24, 1833. The library contains at present about 3,000 volumes. The funds of the institute are derived from assessments of members, school fairs, exhibitions, lectures, &c. A catalogue of the library was printed in 1835, containing 26 pages 12mo.; and another in 1844, of 64 pages 8vo. The library is open daily, Sundays excepted. Members only are entitled to the use of it; others may be admitted by courtesy. The books are lent out, with the exception of large and valuable works. Edward Henry, actuary and librarian.

"This institution was founded for the purpose of promoting the general diffusion of useful knowledge among the mechanical classes by means of *lectures* on natural and mechanical philosophy and other scientific subjects; by founding a *library* and *museum;* by forming *classes* for mutual improvement; holding *conversational meetings*, *debates*, and *discussions* for the benefit of its members; by having from time to time *public exhibitions* for the promotion of excellence in the mechanical arts; and by establishing *schools* for educating on the most approved principles, as well as on the most reasonable terms, the apprentices and children of its members. During the brief space of time this institution has existed, all and even more has been accomplished than its deserving founders could reasonably have expected.

"Connected with the library is a reading-room, amply supplied with the most popular and scientific American and foreign periodicals.

"The terms on which persons may become members, and with their families enjoy all the privileges of the library, reading-room, lectures, meetings, debates, classes, exhibitions, school, &c., are: initiation fee, $1, and a yearly payment of $2. Life membership $25."

Printers' Reading-Room and Library—2,500 *vols.*—The New York Typographical Society was instituted in 1809, for the purpose of affording relief to indigent and distressed members and their families, and to other proper objects of charity. In 1818 the society was incorporated; re-chartered in 1832 for fifteen years; and in 1847 incorporated under the general law of the State, enacted in 1848. The members commenced making donations of books to establish a library in 1823; contributions have been made from time to time, and at present the library numbers about 2,500 volumes, comprising many valuable works in nearly every department of literature. The increased interest manifested in the society during the past year has extended to the library. Many valuable donations of books have been received from publishers and others, and the society has been encouraged to procure a suitable room for the library and reading-room, as well as for social intercourse. The success of this commendable project seems now to be fully assured. [See address of Peter C. Baker, printed in "Proceedings at the Printers' Banquet, January 17, 1850:" 8vo: New York. The rooms obtained for library and reading room are at 300 Broadway. Address C. C. Savage, 13 Chambers street.]

Library of the Lyceum of Natural History—1,653 *vols.*—The Lyceum of Natural History, in the city of New York, was founded in 1818. The library contains 1,653 volumes, consisting chiefly of works on natural history, voyages, travels, &c., containing natural history, and the transactions of kindred societies. The lyceum has, also, extensive collections in mineralogy, geology, fossils, conchology, ichthyology, entomology, amphibia, reptiles, radiata, corals, botany, and small collections of birds and quadrupeds. Very few books have been purchased. Nearly all are donations from individuals, or have been received from societies in exchange for the publications of the lyceum. The rooms occupied by the society consist of three large apartments on the 2d floor of the large fire-proof building, No. 659 Broadway, and known as the medical department of the University of the city of New York. The premises are leased, by the lyceum, of the Medical Faculty for the term of ten years. A catalogue of the books was printed in 1825, 8vo.; another in 1830, 72 pp. 8vo. A new one has been prepared, and will shortly be printed. The library is open every Monday evening, during the meeting of the society. Members have access at any time, on application to the librarian. Books are lent out to members Persons of standing in science, residing at a distance, have, by special vote of the society, been allowed to take out any work from the library. This is seldom done. Any person not a member, wishing to consult the books, can do so on application to the librarian. Robert H. Brownne, 39 Crosby street, librarian.

The American and Foreign Bible Society possesses a library, which, according to the Baptist Almanac for 1850, contains 1,576 volumes.

The College of Physicians and Surgeons in the city of New York possesses a library of 1,200 volumes, valued at $1,500. [Regents' report, 1850.]

The American Ethnological Society, New York city.—The object of the society, thus far, has been the preparation and publication of original memoirs on ethnology. A few hundred pamphlets and books have been presented, a list of which is prefixed to the 2d volume of its transactions. It is intended to form a cabinet at an early day. John Russell Bartlett, secretary.

Free Academy of New York City.—This establishment has but recently commenced operations. Preparations for a library are making, which, it is hoped, may be realized at no distant day. Horace Webster, president.

POUGHKEEPSIE.

Library of the Lyceum of Literature, Science, and Mechanic Arts.—Founded April 6, 1838. Contains about 650 volumes, of which 295 are periodicals and pamphlets; a small collection of manuscripts, maps, charts, engravings; large collections of minerals and natural curiosities. Increases at the rate of about 100 volumes annually. A catalogue in 12mo. was printed in 1845. Open daily from 1 to 8 p. m., Sundays excepted.

The Library of the Lyceum is free to members and their families, to whom books are lent out. The lyceum furnishes the public, gratuitously, with a course of weekly lectures, from distinguished men, during the winter. This has been kept up for several years. J. J. Underhill, R. C. Southwick, C. Swan, committee.

The *Public Library* occupies the rooms of the lyceum, and contains over 3,000 volumes.

ROCHESTER.

Athenæum Library—5,050 vols.—Founded in 1832. The library contains 5,050 volumes, 18 maps, and a small collection of minerals. A public building has been erected, one half of which is occupied by the athenæum, and the other by the "Library of the Court of Appeals." Above is a splendid hall for lectures, 82 feet by 70, and 27 feet high, called "Corinthian Hall." The library rooms are 80 feet long, 34 feet wide, and 15 feet high.

A catalogue was printed in 1847, (40 pages 8vo.;) another is in press. The library is open every day (Sundays excepted) from 8 o'clock a. m. to 9½ p. m. Any person, by paying one dollar per annum, can become a member of the association. Two books can be taken out on one name, and they are usually kept out from two to four days. About 2,000 per week are thus lent. L. R. P. Stockton, librarian.

Library of the Court of Appeals—Contains 3,400 volumes of law and miscellaneous books, a part of the old Chancellor's Library of the State of New York.

This is the proper place to notice a publication of great value to the bar of this city, and which deserves to be imitated in other places. It is "A catalogue of law books in the different libraries in Rochester on the 31st August, 1847, with references to the several owners of each, by William F. Liddle. 8vo., 55 pages: Rochester, 1847." This catalogue contains the law-books in 63 private libraries, besides those in the public library. The catalogue is alphabetical, and under each title all the attorneys owning the books are referred to by means of numbers. An index of subjects is appended to the catalogue.

SCHENECTADY.

Union College Libraries—14,526 vols.—The college library was founded (with the college) in 1795, and contains 7,776 volumes. The yearly average number of volumes added to the library for the last ten years is 468. The annual expediture for books during the same period is $400 39. An imperfect catalogue, intended merely for present use while the librarian is preparing one more perfect, was printed in 1846, (80 pages 12mo.) The new catalogue is nearly completed. The library is opened twice a week, one hour each time. Officers, students, and resident graduates are entitled to the use of the library. About 2,110 volumes are lent out annually. Jonathan Pearson, librarian.

The societies of under graduates possess 6,750 volumes.

Library of the Young Men's Association—3,200 *vols.*

SOMERS

Public Library—210 *vols.*

TROY.

Library of the Young Men's Association—4,000 *vols.*—This association was founded in 1835. The library contains 4,000 volumes, 18 maps, and 40 engravings. The yearly average increase is about 180 volumes; the average expenditure about $100 per annum. There is a small fund of $1,800, raised by the sale of life-membership tickets, the interest of which goes into the contingent fund for general expenses. The library room is 36 feet by 18, newspaper room 40 by 30, and one room 36 by 18, containing 200 volumes of newspapers bound. A catalogue (32 pages 8vo.) was printed in 1845. The library is open for the delivery of books from 11 to 1 o'clock, and from 7 to 9 in the evening, of every week-day. All members of the association are entitled to free access to the library, at all hours of the day, by an annual payment of $2. Clergymen of all denominations are honorary members, and entitled to all the benefits of the association. Books are lent out to members of the association—about 14,000 annually. About 3,000 persons consult the library annually without taking away books.

The Lyceum of Natural History possesses a library, besides a valuable cabinet.

UTICA.

Library of the Young Men's Association—2,200 *vols.*

WEST POINT.

Library of the United States Military Academy—15,000 *vols.*—This library was founded in 1812, and contains (January 1, 1849) about 15,000 volumes, exclusive of pamphlets.

It has, of manuscripts, 4 volumes.
maps and charts, 100.
music, 4 volumes.
engravings, 55 volumes.
busts, 4.
paintings, (portraits) 10.

Additions to the library since 1838:

In 1838,	250 volumes.	In 1843,	171 volumes.
1839,	602 “	1844,	50 “
1840,	159 “	1845,	130 “
1841,	377 “	1846,	25 “
1842,	108 “	1847,	50 “

Average, 192 volumes per annum. Average expenditure, for the last ten years, $838 43. There is no permanent fund for the increase of the library. There is usually an appropriation made by Congress of $1,000 annually for the library, but for the years 1846, 1847, and 1848, no such appropriation was made. The sum of $1,500, however, was given for the fiscal year ending June 30, 1849.

The library occupies one wing of a gneiss building, of the Elizabethan style of Gothic architecture, erected in 1840 and 1841. The remaining portion of the building contains four public offices and rooms for philosophical apparatus; the east tower bearing a transit instrument, the middle one an equatorial telescope, and the west one a mural circle. The cost of the entire building was $50,216 86. The library-room is 46 feet square, with a gallery and two tiers of cases. Height of room 31 feet.

The books are arranged upon the shelves according to subjects—alphabetically under subjects. There are two printed catalogues—the first, August, 1822, 22 pp. 8vo.; the second, 1830, 132 pp. 8vo.; and one in manuscript, nearly complete, will probably be printed soon. The library is open daily, Sundays excepted, between 8 and 12 a. m., and between 1 p. m. and sunset. Only members of the institution and officers residing at the post are entitled to the use of the books. Cadets may draw books on Saturday, to be returned on the ensuing Monday—at other times by special permission of the superintendent in writing. Officers can draw four volumes—professors, eight volumes—for a period not exceeding two months. The annual number drawn is on an average 1,070. The yearly average number of persons consulting the library without taking out books is between 6,000 and 7,000, exclusive of strangers, of whom there are a good many who visit the library during the summer.

The officers are a librarian, a member of the academic staff; and an assistant librarian, a private soldier. The office of librarian is at present (January, 1849) vacant. André Freis is the assistant librarian.

ACADEMY LIBRARIES, (157 IN NUMBER)—66,442 VOLS.

The annual reports of the Regents of the University of the State of New York enable us to give (what we would gladly be able to furnish with respect to the other States of the Union) an exact list of the academy libraries, with the number of volumes contained in each.

The volumes in the libraries for the last three years number as follows:

No. of academies.	No. of volumes.	Average number.
In 1848, 153 academies reported	63,365	414
In 1849, 154....do......do.............	65,524	424
In 1850, 157....do......do.............	66,442	423

The following list of academies, with the number of volumes in the academic library, and the value of the library, is taken from the 63d annual report of the regents, made to the legislature March 1, 1850:

Names of academies.	No. of volumes in the academic library.	Value of library.
Academy at Little Falls	384	$329 00
Addison Academy	166	158 00
Albany Academy	797	1,645 00
Albany Female Academy	1,066	958 00
Albany Female Seminary	707	900 00
Albion Academy	358	397 00
Alfred Academy	451	398 00
Amenia Seminary	1,837	1,698 00
Ames Academy	270	280 00
Amsterdam Female Seminary	397	390 00
Argyle Academy	126	194 00
Auburn Academy	181	164 00
Auburn Female Seminary	112	153 00
Augusta Academy	153	301 00
Aurora Academy	615	566 00
Ball Seminary	130	159 00
Binghamton Academy	587	650 00
Brockport Collegiate Institute	185	198 00
Brookfield Academy	141	156 00
Brooklyn Female Academy	1,660	1,220 00
Cambridge Washington Academy	306	498 00
Canandaigua Academy	528	400 00
Canajoharie Academy	189	277 00
Canton Academy	125	180 00
Cary Collegiate Seminary	307	374 00
Cayuga Academy	322	396 00
Champlain Academy	237	272 00
Cherry Valley Academy	129	211 00
Chester Academy	170	217 00
Claverack Academy	346	221 00
Clinton Academy	345	232 00
Clinton Grammar School	340	250 00
Clinton Liberal Institute	1,177	1,000 00
Clover Street Seminary	325	225 00
Cortland Academy	1,086	1,100 00
Cortlandville Academy	474	461 00
Coxsackie Academy	313	150 00
Delaware Academy	771	1,026 00
Delaware Literary Institute	685	520 00
De Ruyter Institute	242	345 00
Dutchess County Academy	276	190 00
East Bloomfield Academy	361	360 00

LIST OF ACADEMIES—Continued.

Names of academies.	No. of volumes in the academic library.	Value of library.
Elmira Academy	348	$288 00
Erasmus Hall Academy	2,065	496 00
Fairfield Academy	401	840 00
Falley Seminary	202	190 00
Farmer's Hall Academy	379	182 00
Fayetteville Academy	225	235 00
Fort Covington Academy	100	161 00
Franklin Academy, (Malone)	173	213 00
Franklin Academy, (Prattsburgh)	1,182	419 00
Fredonia Academy	1,471	620 00
Friendship Academy	117	168 00
Galway Academy	90	317 00
Genesee Wesleyan Seminary	1,677	1,460 00
Genesee and Wyoming Seminary	412	425 00
Geneseo Academy	777	300 00
Genoa Academy	133	202 00
Gilbertsville Academy and Collegiate Institute	320	401 00
Glens Falls Academy	258	263 00
Gouverneur Wesleyan Seminary	376	400 00
Grammar School of Columbia College	862	362 00
Grammar School Univ. City of New York	none.	....
Granville Academy	217	188 00
Greenbush and Schodack Academy	82	150 00
Greenville Academy	165	180 00
Groton Academy	298	334 00
Hamilton Academy	805	800 00
Hartwick Seminary	854	1,155 00
Hobart Hall Institute	588	469 00
Hubbardsville Academy	97	153 00
Hudson Academy	151	189 00
Ithaca Academy	444	434 00
Jamestown Academy	256	203 00
Jefferson Academy	197	166 00
Jefferson County Institute	972	623 00
Johnstown Academy	187	189 00
Jordan Academy	203	300 00
Keeseville Academy	218	281 00
Kinderhook Academy	540	600 00
Kingsboro' Academy	154	211 00
Kingston Academy	534	500 00
Lansingburgh Academy	441	570 00
Le Roy Female Seminary	581	573 00
Liberty Normal Institute	129	161 00
Lowville Academy	328	167 00

LIST OF ACADEMIES—Continued.

Names of academies.	No. of volumes in the academic library.	Value of library.
Macedon Academy	129	$153 00
Manlius Academy	364	273 00
Mayville Academy	171	152 00
Mexico Academy	480	640 00
Middlebury Academy	736	722 00
Millville Academy	193	180 00
Monroe Academy	144	159 00
Montgomery Academy	398	150 00
Moravia Institute	425	409 00
Mount Pleasant Academy	1,320	1,020 00
Munro Academy	314	308 00
New Berlin Academy	201	176 00
Newburgh Academy	414	370 00
New Paltz Academy	237	282 00
New York Free Academy	not stated.	369 00
North Salem Academy	253	524 00
Norwich Academy	558	455 00
Nunda Literary Institute	191	192 00
Ogdensburgh Academy	312	393 00
Oneida Conference Seminary	1,381	1,328 00
Onondaga Academy	504	456 00
Ontario Female Seminary	559	478 00
Ovid Academy	428	330 00
Owego Academy	219	231 00
Oxford Academy	1,219	922 00
Peekskill Academy	283	207 00
Phipps Union Seminary	383	416 00
Plattsburgh Academy	146	215 00
Pompey Academy	351	374 00
Poughkeepsie Female Academy	213	186 00
Prattsville Academy	201	150 00
Red Creek Union Academy	188	206 00
Rensselaer Institute	407	1,035 00
Rensselaerville Academy	197	169 00
Rhinebeck Academy	386	292 00
Riga Academy	141	224 00
Rochester Collegiate Institute	284	328 00
Rochester Female Academy	170	176 00
Rome Academy	133	177 00
Rutgers Female Institute	2,303	2,141 00
Sag Harbor Institute	95	125 00
St. Lawrence Academy	649	428 00
Sand Lake Academy	242	181 00
Sauquoit Academy	83	171 00

LIST OF ACADEMIES—Continued.

Names of academies.	No. of volumes in the academic library.	Value of library.
Schenectady Lyceum and Academy	325	$590 00
Schoharie Academy	219	272 00
Schuylerville Academy	160	173 00
Seneca Falls Academy	245	438 00
Seward Female Seminary	358	401 00
Sherburne Union Academy	514	521 00
Spencertown Academy	203	159 00
Springville Academy	127	180 00
S. S. Seward Institute	82	150 00
Starkey Seminary	860	539 00
Stillwater Seminary	304	361 00
Troy Academy	338	300 00
Troy Female Seminary	909	1,379 00
Union Hall Academy	464	634 00
Union Literary Society	132	121 00
Union Village Academy	432	337 00
Utica Academy	185	235 00
Utica Female Academy	76	154 00
Vernon Academy	374	320 00
Wallkill Academy	318	330 00
Walworth Academy	114	164 00
Washington Academy	359	350 00
Westfield Academy	424	478 00
Whitehall Academy	180	164 00
Whitesboro' Academy	153	100 00
Whitestown Seminary	821	880 00
Wilson Collegiate Institute	671	627 00
Windsor Academy	181	189 00
Yates Academy	329	324 00
Totals	66,442	69,881

SCHOOL DISTRICT LIBRARIES, (8,070 IN NUMBER)—1,338,848 VOLUMES.

"The number of volumes in the school district libraries was, in 1844, 1,145,250; in 1845, 1,203,139; in 1846, 1,310,986; and in 1847, 1,338,848.

"Selections for the district libraries are made from the whole range of literature and science, with the exception of controversial books, political or religious. History, biography, poetry; philosophy, mental, moral and natural; fiction—indeed every department of human knowledge contributes its share to the district school library. The object of this great charity was not merely to furnish books for children, but to establish in all the school districts a miscellaneous library suited to the tastes and characters of every age."

"By means of this diffusive benevolence, the light of knowledge penetrates every portion of the State, and the sons of our farmers, merchants, mechanics, and laborers have daily access to many well selected books, of which, but for this sagacious policy of our State, a majority of them would have never heard. If knowledge is power, who can calculate the energy imparted to the people of this State by the district school and district library?" [See Annual Report of the Superintendent of Common Schools, January 2, 1849.]

"In 1835 the districts were, by act of legislature, authorized to tax themselves $20 each the first year, and $10 each year afterwards, for the establishment of a library. But few districts availed themselves of this privilege. In 1838 it was made imperative upon each district, the State paying half of the sum." These libraries are "not so much for the benefit of children attending school as for those who have completed their common-school education. Its main design was to throw into school districts, and to place within the reach of all their inhabitants, a collection of good works on subjects calculated to enlarge their understandings, and store their minds with useful knowledge." [Report, 1836.]

NEW JERSEY.

BURLINGTON.

College Library—1,000 *vols.*—Founded A. D. 1846; contains about 1,000 volumes, 3 MSS., 25 maps and charts, a good collection of sacred music, and several hundred coins. No catalogue has been printed. The library is open daily from 3 to 4 p. m. Books are freely lent, mostly to students, to be returned in a week. The college is yet in its infancy, and of course no annual average of expenditure or use can be stated. Rev. A. Frost, librarian.

NEWARK.

Library of the New Jersey Historical Society—825 *vols.*—The society was instituted in 1845. The library was definitely located in Newark in the year 1846. It contains 825 volumes, 410 pamphlets, 760 manuscripts, 20 maps, 2 portraits, and several engravings. The larger portion of the collection has been presented. About $150 per annum have been appropriated to the purchase of books and MSS. The society occupies a room in a building erected by the Newark Library Association. The room is 48 feet by 18, and 12½ high. No catalogue of its collections has been printed. There is no specified time for the opening of the library. Members have access on application to the librarian. The books are not lent out. Samuel H. Pennington, librarian.

The Library Institution—3,000 *vols.*—This institution was chartered by the State in 184–. The library contained in 1849 3,000 volumes, open to the public on the most liberal terms. A handsome building has been erected expressly for the institution. W. A. Whitehead, secretary.

NEW BRUNSWICK.

Rutgers College Library—8,000 *vols.*—Rutgers College was founded in 1770. The library was commenced about the year 1807, and contains (January, 1849) not far from 8,000 volumes. It increases at the rate of about 150 volumes per annum.

Persons entitled to use the library are: officers of the institution, gratuitously; students of the college, and of the theological school, by paying one dollar per annum. None except professors and students are allowed to take books from the library. The number that consult the library without taking books is very limited. Professor C. K. Van Remondt, librarian.

ORANGE.

Lyceum Library—1,000 *vols.*

PRINCETON.

Libraries of the College of New Jersey—16,000 *vols.*—The College of New Jersey was founded in 1746. The college library was commenced as early as 1755, but was entirely consumed in 1801 by the fire which destroyed the college building. The present library (August, 1849) contains 9,000 volumes, and upwards. It has a collection of maps, and also a small one of medals and coins, and has lately received more than 8,000 sulphurets—fac-similes of ancient Roman and other coins. For some years past about $400 per annum have been expended for the purchase of books. The library is kept in a room 66 feet by 33, and is arranged according to subjects. There is no printed catalogue, except one printed in 1760, in 12mo. The library is open twice a week—one hour each time. Persons entitled to the use of the library are, the instructors and students of the college and theological seminary, and resident graduates. Books are lent out, and occasionally to persons at a distance. Professor G. M. Giger, librarian.

There are connected with the college two literary societies possessing libraries—namely: the American Whig Society has 3,500 volumes; the Cliosophic Society 3,500 volumes. Each of these societies has a handsome building, erected exclusively for its purposes by its members. Both are conducted with much spirit.

Library of the Theological Seminary—9,000 *vols.*—This institution went into operation in the year 1812, with a small number of books. The present number of volumes may be from 8,000 to 10,000, mostly theological, including all the Polyglots and most of the Fathers, besides a very valuable collection of about 1,000 volumes of bound pamphlets, collected mostly by one individual. It is a very choice and valuable library. Most of the books have been presented; there is, therefore, no uniformity in the number of books added yearly. No certain sum is devoted annually to the purchase of books. The average annual expenditure would not exceed $200. On one occasion a private library was purchased for about one thousand dollars.

A beautiful Gothic building, 80 feet by 50, of brown stone, has been erected by the liberality of a single individual. The floors are of marble.

The roof is slated. The whole, except the vestibule, is in one room, with a gallery. There are alcoves on the two sides of the room.

The arrangement of the books is partly by subjects, but not uniformly. The library is open twice a week for taking out books; and every day, Sunday excepted, for consultation. The professors and students of the seminary and of New Jersey College are entitled to the use of the library. The institution is connected with the Presbyterian denomination. Rev. A. Alexander, S. T. D., librarian.

TRENTON.

State Library—5,000 vols.—This library was organized in 1824, and contains 5,000 volumes. It has one volume, of about 600 pages, of letters in manuscript, most of them from men who served their country in the Revolution—a number of General Washington's.

There is an annual appropriation of $250 for the purchase of books. The library occupies an apartment in the State House. Two catalogues have been printed—the first in 1838, 36 pages 8vo.; the second in 1847, 37 pages 8vo. The library is open daily during the sessions of the legislature and the State courts, and also of the United States courts which sit at Trenton. The persons entitled to the use of the books are, officers of the executive department, members of the legislature, and members of the New Jersey bar. William D. Hart, State librarian.

Philomathean Library—300 vols.—The Philomathean Society of Trenton Academy has begun to collect a library, by the voluntary contributions of its members and others. About 300 volumes have already been received.

PENNSYLVANIA.

ALLEGHANY CITY.

Library of the Western Theological Seminary of the Presbyterian Church—5,000 vols.—The library was founded in 1827, when the institution commenced its operations, and contains (January, 1849) 5,000 volumes. The increase during the last ten years has been small. A legacy has been left, to be permanently invested and applied to the increase of the library. It will probably yield about $90 or $100 per annum, and will soon be available.

The library is in one of the wings of the seminary edifice, on the third story. The base of the library is a floor projecting some six feet from the wall, with a railing on its margin. The centre is open from the floor of the second story. It was designed, in the construction of the building, for a library-room. Its material is brick, and its dimensions are 50 by 30 feet; height, 11 feet from the floor, and 23 or 24 feet from the floor of the second story in the centre.

The books are arranged upon the shelves according to size. Around the ceiling, above the shelves, is a broad border, on which the letters of the alphabet are printed—one above each tier of shelves. On the margin of each shelf, small letters are placed in alphabetical order. On the back of each book is inscribed its number on its appropriate shelf. On the inside of the cover is this same number, together with the large and small letters, and the whole number as it advances, with the name of the institution. In the catalogue the books are arranged according to subjects; each book, under its appropriate division, having the number and letters referring to its tier and shelf. Thus, by a reference from the catalogue, every book may readily be found, and, by the marks on the book, may quickly be returned to its place. The whole number is of no further use in the plan than to indicate the number of books in the library There is as yet no printed catalogue, but a good one in manuscript.

The library is opened, statedly, once a week, and kept open one hour each time. The professors and students only are entitled to its use. By courtesy the use may be allowed to others. The faculty have the supervision of the library: they appoint one of the students annually to attend to the duties of librarian. Rev. David Elliott, D. D., senior professor.

CANONSBURG.

Jefferson College Libraries—10,000 *vols.*—The catalogue of the college for 1848 contains the following statement with reference to the libraries:

"The college library is not large, but contains a considerable number of rare and valuable books. Important additions have recently been made to it, and efficient measures taken for its enlargement.

"The literary societies are in a flourishing condition, and are probably unsurpassed by any similar associations. They are ornaments to the college, and valuable auxiliaries in the mental training of the students. Their halls are commodious and handsomely furnished, and their libraries extensive and well selected."

This college was founded in 1802, and the number of volumes in the three libraries is given in the American Almanac for 1850 as 10,000.

The Theological Seminary at Canonsburg—2,000 *vols* —This seminary went into operation in 1831, and was incorporated in 1833. It is under the direction of the associated Presbyterian church. The library is said to contain 2,000 volumes.

CARLISLE.

Dickinson College Libraries—14,550 *vols.*—The college library was founded with the college in 1782, and contains 5,050 volumes. For the last ten years the average increase has been 120 volumes per annum; the expenditure for books, $100 per annum.

The books are arranged according to subjects, following the system of Brunet. The library is open once a week for an hour, and is free to all connected with the college. There is no printed catalogue. J. U. Marshall, librarian.

There are two societies of students possessing valuable libraries, namely: the Belles-Lettres Society, 5,000 volumes; the Union Philosophical Society, 4,500 volumes.

CHESTER.

Athenæum Library—1,000 *vols.*

EASTON.

Lafayette College Libraries—5,402 *vols.*—The college library, begun in 1833, contains (January, 1849) only about 402 volumes. The libraries of the literary societies (the Franklin and ——) are larger and valuable, containing together about 5,000 volumes. The college was founded in 1832. Professor J. N. Coffin, librarian.

The Easton Library—3,751 *vols.*—This library was founded in 1811. It contains, (1850,) besides 3,751 volumes of printed books, a small number of manuscripts, maps, engravings, and coins. It increases slowly from the proceeds of a semi-annual tax upon the proprietors, amounting to about 75 dollars a year. A brick building, 60 feet by 35, forming one room 17 feet high, was erected for the library in 1811. The library is open Tuesdays and Saturdays from 3 to 5 o'clock. About 1,500 books are lent out each year. Peter Baldy, librarian.

ERIE.

The Irving Literary Institute was formed July 4, 1839, and incorporated in 1847. The library contains 1,015 volumes. The funds are raised by a semi-annual assessment of members and the loan of books. The amount will average $50 per annum. Voluntary subscriptions are occasionally made for the library. The institute occupies two rooms in the court house—a large hall for weekly meetings, and a private room for the library. A catalogue (16 pp. 8vo.) was printed in 1848. The library is open every Saturday, from 6 to 9 o'clock p. m. The members of the institute, and subscribers at $2 per annum, have free access to the books. The institute maintains a course of free lectures every winter. They have been well attended. Lucian Rust, secretary.

FALLSINGTON, BUCKS COUNTY.

The Fallsington Library Company was founded and incorporated in 1802. The 1st article of its constitution provides, that "no book or books shall ever be introduced into this library which shall have been written with an intention to discredit the Christian religion, or bring into disrepute any society or denomination thereof." Each member pays the sum of $5 entrance fee, and an annual assessment of $1. The present number of shareholders is 45. Number of volumes in the library, 1.650. Sum expended for books annually, $25. [See constitution of the F. L. Co., 12 pp. 12mo., Doylestown, 1836; and catalogue of books belonging to the F. L., 31 pp. 12mo., Newtown, 1844.]

GETTYSBURG.

Pennsylvania College Libraries—6,373 *vols.*—The college library commenced with the college in 1832, and contains (in 1849) 1,773 volumes, about 50 medals, and 400 or 500 coins. About 100 volumes are added annually. About 80 to 100 dollars are expended yearly for books. The library occupies a room in the college edifice 42 feet by 22. It is opened once a week for about an hour. Professors, tutors, resident graduates, and students, are entitled to use the books; others can borrow books through an officer of the institution. There are two literary societies (the Phrenakosmian and Philomathæan,) having libraries of about 2,000 volumes each; a scientific society, with 200 volumes; and a German society, with 400 volumes in the German language: making an aggregate of 6,373 volumes connected with the college. Professor M. L. Stoever, librarian.

Library of the Theological Seminary of the General Synod of the Evangelical Lutheran Church in the United States.—The library was begun in 1825, and contains about 8,500 volumes, and a few MSS. The additions during the last ten years amount to about 800 volumes. There is no printed catalogue. The library is opened for the use of the students every Saturday, one hour. The constitution limits its use to the faculty and students of the institution. By courtesy the professors of Pennsylvania College, located in the same town, are allowed the use of the books. The use is in all cases gratuitous. S. S. Schmucker, chairman of the faculty.

HARRISBURG.

Pennsylvania State Library—10,000 *vols.*—This library was founded 28th February, 1816, and contains, at present, about 10,000 volumes. It occupies two rooms in the capitol, each about 40 feet long by 30 wide and 20 high. A catalogue was printed in 1839, containing 168 pages 8vo. The library is open during the session of the legislature and supreme court, daily from 9 a. m to 1 p. m., and from 3 p. m. to 5 p. m. Books are lent out to officers of the State government and members of the legislature. Strangers can read in the library, but are not by law permitted to take out books. James Johnston, librarian.

HATBOROUGH.

Union Library—3,430 *vols.*—The Union Library Company of Hatborough, Montgomery county, was founded in the year 1755, and incorporated in 1787. The library contains (1850) 3,430 volumes. It increases at the rate of about 100 volumes annually. There has been no permanent fund till quite recently. Nathan Holt left by will a donation of $5,000, of which he directed $3,000 to the purchase of a lot of ground, and the erection of a suitable building thereon. The remaining $2,000 is to be placed out on landed security, and the interest devoted to the purchase of books. In 1849 a stone building was erected, for the above mentioned $3,000. It is 33 feet by 40, and finished after the plan of the Mercantile Library of Philadelphia, in one room 16 feet high. There is a printed catalogue, (64 pp. 8vo.) of which five editions have been issued. It includes a historical account of the institution, its constitution, by-laws, &c. The library is statedly open two days in the week. Any person, by consent of the directors, may become a member on the payment of $10 and an annual tax of one dollar. Strangers and non-subscribers are allowed to use the books in the building, at the discretion of the librarian. Joseph Morton, librarian.

JONESTOWN.

The Swatara Literary Association has lately been formed at Jonestown, the object of which, as stated in the second article of the constitution, is "to establish a library and museum, and to encourage such exercises as will tend to spread general and useful information."

LANCASTER.

Franklin College Library.—This college has a small library of 750 volumes, including pamphlets. F. A. Muhlenberg, jr., librarian. [See Marshall College, Mercersburg.]

The Library of the Mechanics' Institute in this place contains 2,000 volumes. [See Rupp's History of Lancaster County.]

Juliana Library.—A library was established here in 1770 by Thomas Penn, and named, from his wife, the Juliana Library. [Ludewig, in the *Serapeum*.]

LEWISBURG.

Lewisburg University Library—600 vols.—This library was commenced in 1849. A subscription of about $10,000 has been made for the increase of the library; and it will become available, by instalments, within the next three years. Professor George R. Bliss, librarian.

MEADVILLE.

Alleghany College Libraries—8,000 vols.—The college was founded in 1815. It possesses in its libraries about 8,000 volumes. The college library is composed almost entirely of three bequests—the first in point of size by Hon. James Winthrop, LL. D., of Cambridge, Massachusetts, who died in 1821; the second, by the Rev. William Bentley, D. D., of Salem, Massachusetts; the third, by Isaiah Thomas, esq., LL. D., of Worcester, Massachusetts. A catalogue of the library (130 pp. 8vo.) was prepared and printed in 1828 by the Rev. Timothy Alden, who also compiled the catalogues of the libraries of the Massachusetts and New York Historical Societies. In the Alleghany Library catalogue each bequest is separately registered, under the name of its giver.

"In the catalogue, the intelligent will perceive that there is an extensive range of the best editions of the Greek and Roman Classics, and of the ancient Fathers of the Christian Church; that there are books in thirty different languages, ancient and modern, with lexicons and grammars, and elementary books for studying most of them; and that in history, ancient and modern, in belles-lettres, and other branches of literature and science, there is a most excellent collection." [See Remarks of Mr. Alden, Catalogue, p. 136.]

The Library of the Meadville Theological School—5,300 vols.—This institution is under the direction of the Unitarian Congregationalists. The library was founded simultaneously with the school, in 1844, and contains 5,300 volumes. For the five years since the library was established, nearly 900 volumes per annum on an average have been added to it. Somewhat more than $250 from the funds of the school have annually been appropriated for the purchase of books.

The library is open twice a week—one hour each time. Students and officers of the institution are entitled to the use of the books. A discretionary power of lending to any literary gentleman is vested in the faculty, and has always been exercised when applied for. No charge is made for the use of the library. Between 2,000 and 3,000 books are lent out annually. The number is increasing with the growth of the library.

The private libraries of the officers of the school are as largely composed of works of reference, and as freely open to students, as the public library. They contain about 3,700 volumes. Professor F. Huidekoper, librarian.

MERCERSBURG.

Library of the Theological Seminary of the German Reformed Synod of North America—6,000 *vols.*—The library was commenced with the seminary, in 1825. It contains at present (1850) about 6,000 volumes, mostly in German. The increase has been small—not more than 50 volumes per annum. No catalogue has been printed. The library is open one hour each week. A fee is charged to the students for the use of the library. John W. Nevin, D. D., senior professor.

Marshall College Libraries—7,000 *vols.*—The college library contains about 1,000 volumes. The Diagnothian Society has a library of 3,000 volumes, and the Goethean Society also has about 3,000 volumes. Each of these libraries is in a separate hall.

The college library is distributed among the professors—each professor having charge of those books pertaining to his own department. There is at present no room appropriated to the books. The institution was chartered in 1835.

Measures have been taken for uniting this college with Franklin College, Lancaster. The corporate name will be Franklin and Marshall College. The success of this plan will depend upon the raising of $25,000 for the erection of buildings in Lancaster, and $15,000 for the endowment of a professorship in Pennsylvania College, Gettysburg.

NORRISTOWN.

The Library Company—2,515 *vols.*—The Norristown Library Company was founded in May, 1796, and (in 1850) possesses 2,515 volumes, (to wit: 4 folios, 30 quartos, 872 octavos, and 1,609 duodecimos, besides phamphlets.) There is no permanent fund. There is an annual income of about eighty dollars arising from an assessment of one dollar upon each shareholder. The sum thus obtained is mostly devoted to the purchase of books. In 1835 a small wooden building was erected expressly for the library; it is 15 feet six inches square. A catalogue (40 pp. 18mo.) was printed in 1836. The library is open every day. Shareholders pay $5 for a share, and $1 annual tax. Books are lent, for a small charge, to other persons. About 200 are thus lent annually. R. Adamson, librarian.

PHILADELPHIA.

The Library Company and the Loganian Library—60,000 *vols.*—The following facts of general interest, respecting the history of this venerable and useful institution, are extracted from an article written for Waldie's Portfolio, by John J. Smith, esq., the librarian.

"The first entry in the records of the Library Company, is in the following words:

"'The minutes of me, Joseph Breintnall, secretary to the directors of the Library Company of Philadelphia, with such of the minutes of the same directors as they order me to make, begun on the 8th day of November, 1731. By virtue of the deed or instrument of the said company, dated the first day of July last.

"The said instrument being completed by fifty subscriptions, I subscribed my name to the following summons or notice which Benjamin Franklin sent by a messenger, viz:

"'To Benjamin Franklin, Thomas Hopkinson, William Parsons, Philip Syng, jr., Thomas Godfrey, Anthony Nicholas, Thomas Cadwalader, John Jones, jr., Robert Grace, and Isaac Penington.

"'GENTLEMEN: The subscription to the library being completed, you, the directors appointed in the instrument, are desired to meet this evening at 5 o'clock, at the house of Nicholas Scull, to take bond of the treasurer for the faithful performance of his trust, and to consider of and appoint a proper time for the payment of the money subscribed, and other matters relating to the said library.

"'JOS. BREINTNALL, *Secretary*.

"'PHILADELPHIA, *November* 8, 1831.'

"At this meeting a treasurer, William Coleman, duly executed a bond with sureties, and Benjamin Franklin proposed that the said Coleman attend at suitable places to receive the subscription moneys; which, says our secretary, 'it was the general opinion should not be delayed, lest the directors be disappointed in sending it to England this fall to purchase books, or that other disappointments, prejudicial to the library design, should happen by delays or negligence on any hand.'

"The price of a share was fixed at forty shillings, and on the first evening of attendance for that purpose ten persons appeared and paid the amount of their subscriptions. Several individuals, however, were dilatory in meeting their engagements, and B. Franklin printed and sent them notice either to pay on a certain evening, or signify their determination to relinquish the copartnership Much difficulty and no little forbearance appears to have been the lot of the directors and treasurer, in collecting from some of the original subscribers; but, satisfied of the utility of the project, at a meeting on the 29th of March, 1732, the sum in hand being 'above half' the amount originally intended to be raised, it was concluded to be the interest of all concerned to send for some of the books immediately. Thomas Godfrey, at this meeting, informed the directors that Mr. James Logan had heard of the plan, and would willingly give his advice in the choice of books; the minute on the subject is in these words: 'Upon this information, Thomas Godfrey was requested to return the thanks of the committee to Mr. Logan for his generous offer; and the committee esteeming Mr. Logan to be a gentleman of universal learning, and the best judge of books in these parts, ordered that Thomas Godfrey should wait on him and request him to favor them with a catalogue of suitable books against to morrow evening, which T. G. readily agreed to do.'

"With the advice of Mr. Logan the list was made out, and Robert Grace, 'to expedite the affair,' agreed to draw on Peter Collinson, mercer, in Gracious street, London, for '£45 sterling at 65 per cent. advance the current rate,' in favor of and to be remitted by Thomas Hopkinson, then about sailing for England, with directions to purchase as many volumes as he could for the money. The catalogue of this first effort evinces considerable judgment, and was very carefully prepared with a view to facilitate the acquisition of knowledge in the various departments required by the wants of a young community.

"In October, 1732, the first importation of books was received by Captain Carnock in good order. T. Hopkinson informed the directors that he had received advice from T. Cadwalader and P. Collinson in adding and omitting various books; and that 'Peter Collinson, who had given great assistance, had moreover made the company a present of two valuable books.' His claim is thus established of having been the first donor to the yet infant library.

"The importance of the step thus taken, although it was on a small scale, can be justly appreciated only by a knowledge of the fact, which is stated in the reply to Peter Collinson, that there was no manner of provision made by the government for public education, either in this or the neighboring provinces, 'nor so much as a good bookseller's shop nearer than Boston.'

"The books were taken to 'Robert Grace's chamber, at his house in Jones's alley,' and there placed on the shelves, a catalogue made out, and Dr. Franklin undertook to print the blank promissory notes for the librarian to fill up, and get subscribed by those to whom he lent books. The rules and regulations adopted were few and simple. The first librarian, Louis Timothee, gave attendance from 2 to 3 on Wednesdays, and on Saturdays from 10 till 4. He was allowed to permit 'any civil gentleman to peruse the books of the library in the library-room, but not to *lend or to suffer to be taken* out of the library, by any person who is not a subscribing member, any of the said books, Mr. James Logan only excepted.' Timothee, it appears, occupied Grace's house, and he was to receive at the expiration of three months 'three pounds lawful money certain,' and a further 'reasonable reward,' as should be agreed on in consideration of services and rent.

"In December, 1732, several new applicants presented themselves, and were admitted. Dr. Franklin produced the printed catalogue, which he presented without charge.

"The original number of fifty subscribers was not completed till the 22d February, 1733, when Joseph Growden signed the constitution, being the fiftieth member.

"William Rawle appears to have been the first American donor, having, on the 12th of March, 1733, presented 'six volumes or books of the works of Mr. Edmund Spenser.'

"On the 15th of May, of the same year, it was agreed by a committee of directors to draw up an address to Thomas Penn, proprietor, 'in order for his countenance and protection in an affair so useful and well intended as the library, and which the proprietor signified through his secretary, Mr. George, that he approved and designed to encourage.'

"Mr. Penn replied that he took the address 'kindly,' with the assurance that he should be always ready to promote any undertaking so useful

He presented several articles to the institution, and it is to the honor of the proprietary family that they promoted the design as long as they continued to preserve any influence in the province.

"Mr. Timothee having vacated his office, Benjamin Franklin, one of his sureties, offered to take his situation for the current year, in consideration of Timothee's having been serviceable to him; he occupied the station of librarian for three months and a day, and was succeeded by William Parsons. During the period of Franklin's service as librarian, the room was agreed to be open but once a week, on Saturdays from four to eight—it having been observed that borrowers rarely came on Wednesdays, and four hours were found amply sufficient to supply all applicants. The librarian's salary was then reduced to £6.

"The increase of books was supposed to raise the value of a share annually ten shillings, and I find the price gradually increased.

"On the 12th of December, 1737, the directors were informed by the secretary that the proprietor was pleased to say that nothing remained to delay his grant of a lot of ground he intended to bestow on the company for their library. In May, 1738, a letter was received from John Penn, with a present of an air-pump. The first paragraph conveys information highly honorable to the company. It is dated London, 31st of January, 1738, and begins:

"'GENTLEMEN: It always gives me pleasure when I think of the Library Company of Philadelphia, as they were the first that encouraged knowledge and learning in the province of Pennsylvania.'

"A suitable reply and a vote of thanks for the lot and the air-pump were ordered to be returned to the generous donor. The pump excited considerable curiosity among the citizens—frequent notices of application to borrow it being minuted; a commitee was appointed to provide a case and frame for it, with glass lights in the door, 'to look ornamental in the library-room.'

"The first, and, I regret to add, one of the very few presents of money made to the institution, was from Dr. Walter Sydserfe, of Antigua, in 1738, who, having the sum of £58 6*s.* 8*d.* due him in this country, generously presented it to the company. In June, 1739, the number of members had been increased to 74.

"On the 7th of April, 1740, the books were removed to 'the upper room of the westernmost office of the State-house'—the use of which had been lately granted to the company by the assembly.

"In a catalogue printed in 1741, in my possession, there is a short account of the state of the institution. Shares were then granted at the price of £6 10*s.* In this year, John Penn, esq., presented a microscope and camera obscura, still in the company's possession.

"In 1746, Samuel Norris bequeathed the company £20.

"From 1748 to 1752, many of the minutes are missing, and I have only to note the reception of a telescope and a number of valuable books from Thomas Penn, esq.

"In 1752, 'a noble present of ancient medals' was received through Mr. Peters from Mr. Gray, member of Parliament for Colchester.

"In 1762 Charles Thomson, who afterwards became Secretary to Congress, was elected a director, and in April the long expected patent from the Penns for a lot of ground in Chestnut street, near Ninth, was received. The lot was enclosed with a post-and-rail fence, and continued for many years to yield a small revenue. On Dr. Franklin's return from Europe he was unanimously re-elected a director by the board, to supply the place of Samuel Shoemaker, resigned.

"On the 14th of February, 1763, the celebrated John Dickinson was elected a director. In an address to John Penn, November 21, 1763, occurs the following paragraph: 'The encouragements the library met with in its infancy have had good effects. Many other libraries, after our example and on our plan, have been erected in this and the neighboring provinces, whereby useful knowledge has been more generally diffused *in these remote corners of the earth.*

"Some dissatisfaction is noted at this period at the new regulations, by which members were prevented from coming into the library and taking down books; in consideration of which it was '*Resolved*, That the librarian should prepare a bond, which should be tendered to every member who should desire the privilege of entering the library and examining the books there, at the hours of attendance on Saturdays, by which he should bind himself to be answerable for his proportionable part of the loss that may arise from any books being lost or stole out of the library.'

"This appears to have had the desired effect; as, however anxious members might have been to consult the books, they could not be supposed willing to join in the librarian's responsibility for losses.

"1767. Mr. Hopkinson visiting England, the directors, in order not to lose his services on his return, were allowed to appoint a proxy. He brought home with him a few rare books, purchased by Dr. Franklin, with the company's money, and a present from Benjamin West, 'formerly,' says the minute, 'of this city, but now of London, historical painter: a woman's hand, taken from an Egyptian mummy, in good preservation.' This hand, which has sometimes been called Cleopatra's, is still in the building, and, notwithstanding the length of time which it has been exposed to the action of the air, is in perfect preservation.

"1768. On the 20th of February, 1768, a law was enacted for admitting new members for the sum of £10.

"1769. At a meeting of the directors, February 13th, 1769, the following gentlemen, viz: George Roberts, Jonathan Shoemaker, James Pearson, Charles Jervis, David Evans, Anthony Morris, jr., and Moses Bartram, being a committee of the Union Library Company of Philadelphia, waited on the board, to signify their approbation of the plan which had been some time in agitation, of uniting the two institutions. The directors replied, 'that they thought such a scheme might better answer the intention of public libraries, than if they were to continue in separate bodies;' and on the 15th of March a law was enacted, giving the directors 'full power and authority to admit the members of the Union Library Company,' &c.

"Of the value of this accession of books I have no data to form a judgment. The Union Company owned the house in Third street where their books had been kept, and it was for a considerable period a source of revenue, until sold. Benjamin Franklin, at this time in London, handed the orders for books to William Strahan for shipment.

"The institution having now acquired additional consequence by the accession of new members, and an increase of books, the board petitioned the assembly of the province for permission to erect on some part of the

State-house lot such a building as would prove an ornament to the city, and continue to accommodate their rapidly increasing library. This application was refused; and at a general meeting of the company, convened by advertisement, on the 5th of October, 1771, it was deemed inexpedient to build elsewhere, and the project was for the present suffered to rest. It was not till the 25th of September, 1769, that the room was opened three days in the week; these days were Tuesdays, Thursdays, and Saturdays, for four hours each, and two librarians were then appointed, viz: John de Maurengault and Ludowick Sprogell, at an annual salary of £20 each.

"1771. Another junction was formed in 1771, with the Association Library Company, but there are no data by which to judge of the extent of this institution. The Amicable Company, also admitted about this time, is only casually mentioned, and the two collections were probably of no great value.

"1773. Early in the year 1773, the second floor of Carpenters' Hall was rented, and the books removed from the room in the State-house, which was now too small for their accommodation; the library was then first opened daily, from two o'clock till seven, under the charge of Charles Cist, at an annual salary of £60. The books were here first placed behind the protection of latticed doors. The increase of the cabinet of coins seems to have been a favorite project: a great number are noted as having been presented from time to time. In October, 1773, several specimens of minerals, and 53 curious coins, were presented by Edward Pole. Unfortunately, the secretary, in reporting the gift, was obliged to add the following memorandum: 'but the library being entered by some thief (as supposed) last night, he carried off all the coins and tokens, together with some change which was left in the drawer.' Mr. Pole, however, received the thanks of the directors, and the articles were advertised, but never recovered.

"1774. On the 31st of August, 1774, it was, 'upon motion, ordered that the librarian furnish the gentlemen who are to meet in congress in this city, with such books as they may have occasion for during their sitting, taking a receipt for them.' Congress enjoyed this privilege during the whole period of its sittings in Philadelphia, and the members experienced much inconvenience from the want of a similar institution for reference after removing to Washington, before a good library had been collected in the capitol. The members of the legislature of Pennsylvania likewise enjoyed the use of the books for a long period, free of charge.

"1776. In May, 1776, an advertisement appeared in the Pennsylvania Gazette, and other journals, requesting a general meeting of the company, in order to consider of the propriety of empowering the directors to remove the books and effects of the company in case any event of the war should make that measure necessary. Two attempts to get together enough members to pass such a law failing, the books remained, and were unmolested.

"The British army had possession of Philadelphia from September 26, 1777, to June 18, 1778, but it does not appear that the company sustained any loss from those who composed it. The officers, without exception, left deposites, and paid hire for the books borrowed by them.

"1777. In 1777 the library room was occupied by the sick soldiery, and Messrs. Alison, Jones, and Hughes were 'appointed a committee, on the 11th of March, to wait on General Gates, commanding officer in this city, in order to procure, if possible, an order for their removal.' During the whole progress of the war, the importation of books was of course suspended. The funds thus accumulated were expended, on the conclusion of peace, in a large importation of the standard works which had appeared in the interval. By the will of the Honorable William Logan, the institution received this year a very handsome bequest of books of ancient authors, being a more extensive and valuable gift than any heretofore received. They may all be traced in the catalogue by the *L* attached to each.

"1779. Jno. Todd, librarian, received £100 per annum and a share.

"1781. On the 4th of May, 1781, the directors agreed to receive 30 shillings state money in lieu of a bushel of wheat, by which the annual payments were the previous year directed to be made.

"1783. The committee on importations remitted £200 sterling to London on the 10th of June, 1783, nine years having elapsed since their last order. Jos. Woods and William Dillwyn were selected as proper agents, from their well-known attachment to literature, and knowledge of books; they acted during the remainder of their lives to the satisfaction of the directors, and Jos. Woods's son is now the agent. In their letter the committee of correspondence state, 'we shall confide entirely in your judgment to procure us such books of modern publication as will be proper for a public library, and though we would wish to mix the utile with the dulce, we should not think it expedient to add to our present stock anything in the *novel* way.' This has been the uniform plan pursued, with the exception of a few of the best class of novels and romances; the consequence has been that, with the very great increase of the number of volumes, the shelves are supplied with books of real merit in most other departments, and are not lumbered with the temporary trash so greedily devoured by the sickly taste which procures its mental supplies from circulating libraries.

"1783. November, 1783, Dr. Franklin presented six volumes of the natural history of the south of France."

The erection of a building for the accommodation of the library having been long a matter of discussion, "at a general meeting, held June 1, 1789, a large number of members appeared, either in person or by proxy, and a law was passed giving the directors power to proceed, as soon as one hundred new members should be added to the list, to appropriate the money on hand, reserving sufficient for the current expenses, and to sell the ground rents and real estate owned by the company. Bishop White was nominated by the directors chairman of this meeting, at which he presided.

"All the shares requisite, except nineteen, were soon subscribed, many of which were to be paid for in labor. The directors and treasurer and secretary assuming to themselves to procure the remaining nineteen, the purchase of the lot and erection of the building was proceeded in with all convenient speed. The present site was purchased of Mary Norris and Dr. Logan. A number of plans were submitted for approval, and the one prepared by Dr. William Thornton, with some slight alterations, was adopted, for which he received a share. It may be supposed that this undertaking was not without its difficulties, and I find that, owing to the low state of the funds, the directors, treasurer, and secretary, individually, advanced sums amounting to two hundred and fifty pounds, of which Josiah Hewes advanced fifty pounds, and the others from ten to twenty-five pounds.

"1789. The first stone of the edifice was laid on the 31st of August, 1789; the minutes state, 'that, upon the suggestion of Dr. Benjamin Franklin, a large stone was prepared, and laid at the southwest corner of the building, with the following inscription, composed by the Doctor, except so far as relates to himself, which the committee have taken the liberty of adding to it:

'Be it remembered,
in honor of the Philadelphia youth,
(then chiefly artificers,)
that in MDCCXXXI,
they cheerfully,
at the instance of Benjamin Franklin,
one of their number,
instituted the Philadelphia Library,
which, though small at first,
is become highly valuable and extensively useful,
and which the walls of this edifice
are now destined to contain and preserve;
the first stone of whose foundation
was here placed
the thirty-first day of August, 1789.'

"1790. By the 30th of December, 1790, the books were all removed and ready for delivery, when it was resolved to have the room open daily, from one o'clock to sunset, and Zachariah Poulson was continued librarian, at one hundred pounds salary. During the progress of the building, more than the stipulated one hundred names were added to the list of stockholders—many apprentices having been allowed by their employers to give sufficient labor to purchase the privilege of admission. Their names are faithfully recorded; and it may, in future, be interesting to their descendants to discover that they are reaping the benefits of literary instruction from the honest labor and the sweat of the brows of their progenitors.

"Among the benefactors of the library occur the names of Robert Barclay, of London, and of Abraham Claypoole, of Pennsylvania. The former repeatedly sent presents of rare or curious books, and till his death continued to correspond with his American friends, and to mention the institution with interest. The latter left the company, by will, one hundred pounds.

"1791. In January, 1791, the directors again tendered to the President and Congress the free use of the books in the library, in as full and ample manner as if they were members of the company. President Washington, through his secretary, Tobias Lear, returned thanks for the attention in a very handsome note.

"1782. On the 18th of February, 1782, Doctor Parke informed the board that the heirs of James Logan had made a proposition to transfer to the Library Company of Philadelphia the Loganian Library, and also to convey to them, under certain conditions, a lot of ground in Philadelphia, and certain rents charge, together with the arrearages thereof, now due from estates in Bucks county. On this subject a committee was appointed to inquire into the condition of the property, and the terms intended to be annexed to the transfer.

"1792. An additional five-foot lot having been purchased of Samuel M. Fox, on Library street, a building was erected for the accommodation of the Loganian books by the Library Company of Philadelphia, for which the Loganian trustees pay an annual rent.

"On the 4th of October, John Fitch's manuscripts, respecting the steam-engine, were deposited in the library, under seal, with a request that they might be kept unopened till the year 1823. This was done, and as they have undergone an examination, I shall not here attempt their analyzation.

"1793. On the 30th of August, 1793, at a general meeting of the members, the price of shares was raised to forty dollars, at which sum they still remain.

"1799. In April, 1799, Henry Cox, of the kingdom of Ireland, presented a large number of manuscript volumes relating to the history of his native country. They consist of the original correspondence of James the First with the Privy Council of Ireland, from 1603 to 1615, inclusive, and a great variety of historical data, the value of which remains unknown. In one of the volumes is an original letter from Queen Elizabeth, dated in 1568. Several valuable printed books are also in this collection.

"1804. In this year the institution was greatly enriched by John Bleakly and the Rev. Samuel Preston. The former left, by will, one thousand pounds to the library, and the latter bequeathed a most valuable collection of rare and curious books, selected with great taste and judgment, together with two shares of United States Bank stock. Dr. Preston was influenced, in selecting this library for the reception of his own, by our countryman, Benjamin West, who painted the portrait of the donor, which was, in the succeeding year, presented by Mrs. West, as an appropriate ornament for the library rooms. To appreciate the value of Preston's library, it must be examined in detail. There are in the collection many rare books of plates, &c., of the most costly description, which the funds of the institution would forever have forbidden being purchased.

"George Campbell was now elected librarian—an office he filled for twenty three years, during which long period he was never once prevented by sickness from attending to his daily duties—a circumstance almost unprecedented in the annals of a salary officer. Under his charge, the institution continued to flourish, and was again enriched, at the period of his resignation, by the bequest from William Mackenzie of 500 rare volumes, and the purchase from his executors of the additional number of 1,466.

"Since this period, about 5,000 volumes were purchased, on very favorable terms, from James Cox, an artist, since deceased, consisting of many expensive volumes on the fine arts, and miscellaneous books. They supplied a prominent deficiency, and many rarities are among them."

From the preface to the last catalogue we take the following:

"Besides the books, the personal property consists in some available funds yielding interest, the sale of shares, the price of each of which since 1793 has been fixed at forty dollars, and the annual payments of four dollars from each member. The real estate of the company consists of the lot and buildings where the Philadelphia and Loganian libraries are kept.

"The members dispose of their shares by transfer or will; but the assent of the directors, as well in such cases as in case of an original purchase, is previously necessary—a restriction early adopted, in order as much as possible to prevent improper persons from having access to a collection of a nature peculiarly liable to injury."

The preface to the catalogue of the *Loganian Library* contains the following account of that establishment:

"This collection of rare and valuable books, principally in the learned and existing languages of the continent of Europe, owes its origin to the Honorable James Logan, the confidential friend and counsellor of William Penn, and for some time president of the council of the province of Pennsylvania. Its foundation consists of a portion of his own private library, which, having collected at considerable expense, he was anxious should descend to posterity, and continue usefully to extend to others the means of prosecuting those pursuits he had himself so successfully cultivated. With this view, he erected a suitable building in Sixth street, near Walnut, for the reception of a library, and, by deed, vested it (with the books and certain rents, for the purpose of increasing their number, and paying a librarian) in trustees, for the use of the public, forever.

"This deed he afterwards cancelled, and prepared, but did not live to execute, another, in which some alteration was made in the funds and regulations. After his death, his children and residuary legatees, with commendable liberality, carried into effect the intentions of Mr. Logan, and conveyed the building, books, and rents charge to trustees, who caused the library, consisting of more than two thousand volumes, to be arranged, and a catalogue to be printed.

"About one thousand three hundred volumes, collected by Doctor William Logan, of Bristol, England, a younger brother of James Logan, and by William Logan, of Philadelphia, son of the founder, were afterwards bequeathed to the institution by the latter gentleman, who acted for some time as librarian. After his death, in 1776, the library remained unopened during several years.

"To insure its perpetuity, the legislature of Pennsylvania, in 1792, at the request of James Logan, the only surviving trustee, passed an act annexing the Loganian library to that belonging to the Library Company of Philadelphia, under certain restrictions. This act constitutes the directors of that prosperous company for the time being trustees, together with the eldest male descendant of the founder, and two other gentlemen to be by him appointed.

"Since the two libraries were thus connected, the books of the Loganian institution have been kept in a room appropriated to the purpose, owned by the Library Company of Philadelphia, in which they were first opened for the benefit of the citizens in 1794, in accordance with the original intentions of James Logan and the act of assembly.

"Very considerable additions have continued to be made to the collection by means of the funds arising out of the sale of the lot and building in Sixth street, and from the rents of the lands in Bucks county, Pennsylvania, settled originally on the institution by the Logans, and by donations—particularly of that from the late William Mackenzie, esq., a native of Philadelphia, who bequeathed by his last will, in 1828, 'all his books printed before the beginning of the eighteenth century, and eight hundred volumes more, to be chosen by the trustees, from his French books and Latin books printed since the beginning of the eighteenth century.' This valuable bequest consists of 1,519 volumes of great rarity and value; and subsequently 3,566 volumes were purchased from his executors.* They had been accumulated by Mr. Mackenzie during a life extended beyond seventy years, which had been almost exclusively devoted to literary pursuits. During this period, one of his few intimate friends says 'he believes he never had an enemy: at least, from the purity of his principles and the correctness of his conduct, I am sure he never deserved one.' "

The Philadelphia Library contained in February, 1785, 2,764 works, in 5,487 volumes; in July, 1807, 8,074 works, in 14,457 volumes; in August, 1835, 18,762 works, in 35,221 volumes.

The Loganian Library contained, when it was annexed to the Library Company of Philadelphia, in August, 1792, 3,064 works, in 3,953 volumes; in August, 1835, 6,922 works, in 8,663 volumes.

The Philadelphia and Loganian Libraries contained in August, 1835, 25,684 works, in 43,884 volumes; in August, 1849, 60,000 volumes.

From $3,000 to $4,000 per year are expended in the purchase of books.

The income of the institution is—

From annual payments of members	$3,800
From other sources, real estate, &c.	2,500
Total	6,300

The books are arranged as they are received, according to size. The first catalogue was gratuitously printed by Benjamin Franklin in 1732; the second by Franklin in 1741, (56 pp. 12mo;) the third by Franklin and Hall in 1757, (132 pp. 8vo.;) others in 1764, (150 pp. 8vo.;) in 1770, (8vo.;) in 1789, (406 pp. 8vo.,) with supplements, 1793, (38 pp.;) 1794, (34 pp.;) 1796, (38 pp.;) 1798, (48 pp.;) 1799, (32 pp.;) and 1801, (23 pp.;) in 1807, (616 pp. 8vo.) The last printed catalogue was published in 1835, in two volumes 8vo., making 1,050 pages. This catalogue is classed on the system of Brunet, somewhat altered. The index is alphabetical. Under each sub-class, the titles are arranged alphabetically under the names of authors. Anonymous works are recorded after the others. In the supplements the division of belles lettres is included under that of science and arts. A supplement was published in 1844, and a second supplement in 1849. A catalogue of the Loganian Library was published in 1837, (450 pp. 8vo.) The first catalogue of this collection was printed in 1760, (116 pp. 8vo.) The library is open every weekday from 10 a. m. till sunset.

Persons entitled to the use of the library are, stockholders who pay $4 yearly; others on deposite and hire. The books are lent out in great numbers, but how many per annum is not ascertained. The number of persons who consult library without taking away books is very considerable—the exact number cannot be stated. A deposite of double the value of the books taken, will obtain most of the books of the institution, if applied for by proper persons. John Jay Smith, librarian.

Library of the American Philosophical Society—20,000 vols.—The American Philosophical Society, the oldest of the scientific associations in

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"*The whole number of volumes received by the Loganian Library from Mr Mackenzie's library was 5,685, and by the Philadelphia Library 1,965—being a total of 7,051 volumes. The books of Mr. Logan's original collection, and those bequeathed by William Logan, are designated in the catalogue by an L.; those bequeathed by Mr. Mackenzie, by an M."

the United States, was formed in 1742. The American Society for Promoting and Propagating Useful Knowledge in Philadelphia was established in 1766. These two societies were united in 1769, and incorporated March 15, 1780, as the "American Philosophical Society held at Philadelphia for Promoting Useful Knowledge." The library contains about 20,000 volumes. The society has also an "extensive collection of manuscripts, maps, charts, and engravings, and, in its cabinet, medals, coins, &c." The precise number "cannot readily be given." The annual increase is about 200 volumes. Few books are purchased except scientific periodicals, &c., by subscription. The chief accessions to the library are by donations from learned societies and individuals abroad and in this country. The library is in the hall of the society, a brick building 50 by 70 feet, erected in 1786, on a part of the "State House Square," in the city of Philadelphia, granted to the society for that purpose by the State legislature, in 1784. The books are arranged on the shelves in numerical order, each volume having its number attached. Folios, quartos, and octavos have their respective systems of numbers. No catalogue has been printed since one in 1824. It is an 8vo. of 290 pages. The library has since that time greatly increased. A new catalogue is in preparation. The laws of the society require the library to be opened every Friday evening from 7 to 9 o'clock, and at such other times as the librarian may think proper. All members of the society are entitled to the use of the library; and facilities are afforded, at the discretion of the librarian, to well known visiters of respectable character. Books are lent out to members. A considerable number of persons consult the library at the room. Charles B. Trego, secretary and librarian.

Mercantile Library—12,232 *vols*. The Mercantile Library Company of Philadelphia was founded in 1823. The library contained, January, 1849, 12,232 volumes, "principally of works of permanent value." "The directors have been careful to exclude from the shelves books of a frivolous character, or of demoralizing tendencies." The annual increase is about 600 volumes.

The building of the company is on the southeast corner of Delaware, Fifth, and Library streets. It was erected in 1845, at a cost, including furniture, &c., of $23,199 42. The interior of the building is divided into nineteen apartments. The entire second story is occupied as the library and reading-room, and the intermediate story of the east wing is used by the directors: all the other rooms are rented. The present librarian is James Cox.

The Academy of Natural Sciences—12,000 *vols*.—The American Academy of Natural Sciences originated on the 25th of January, 1812. It was incorporated in 1817. The library contains about 12,000 volumes. It had 435 separate maps and charts in 1836, when the catalogue of the library was printed; since which date the additions have been few. For the last three years the annual increase has been about 700 volumes. This is exclusive of periodicals, *serials*, and pamphlets. There is no permanent library fund. The increase is mostly from donations, deposites, and occasional purchases. The library occupies an apartment on the ground floor of the hall of the society. It is about 45 feet by 28, and 14 feet high, with a gallery on all its sides. The books are arranged according to subjects. A catalogue was printed in 1836, containing 300 pages 8vo. At that time the library contained 6,890 volumes. An appendix will soon be prepared. The library is open daily, Sundays excepted, from 11 a. m. till sunset. The members alone are entitled to the use of the books. The friends of members, however, are by courtesy allowed access to the library. William S. Zantzinger, M. D., librarian.

The cabinet is the best in the United States. The collection of birds is said to be the largest in the world, containing about 25,000 specimens, many mounted in skins. The collection of eggs and nests of birds is also the most extensive ever made. The collections of mammalia, fishes, reptiles, crustacea, insects, and plants, are superior to any others in this country.

The library is rich and valuable in all departments of natural history. In ornithology it is quite complete.

For these magnificent collections the academy is mainly indebted to the munificence of three gentlemen—William Maclure, esq., Dr. R. Eglesfield Griffiths, and Dr. Thomas B. Wilson. Mr. Maclure presented 5,233 volumes. Among them is a curious and important collection of pamphlets and books published in France during the first Revolution. The donations of Dr. Wilson, if less in number, are not inferior in value to those of Mr. Maclure. His valuable gifts are still continued. They are presented with the wise condition that they shall never be taken from the building.

The new building was commenced in 1839, on a vacant lot, corner of Broad and George streets. The edifice is entirely fire-proof. It is well adapted to its purposes; but, although ten years ago it was considered large enough to accommodate the collections for half a century, it is now crowded to excess.

The Apprentices' Library– 11,700 *vols.*—The Apprentices' Library Company was incorporated April 2, 1821. In 1841 a separate department was established for girls. The boys' library contains about 9,000 volumes; the girls' library about 2,700. For the last three years the average annual increase of both libraries has been 900 volumes; the expenditure about 400 dollars per annum. The annual income of the institution is: from members, $550; from investments, $450. There is a catalogue for each library. For the boys' library the last catalogue (143 pages 12mo.) was printed in 1847; for the girls' library in 1849, (52 pages 12mo.)

The library is opened, for boys, on Monday, Wednesday, Friday, and Saturday evenings, about 2½ hours each; for girls, on Thursday afternoon from 3 to 7, and on Saturday afternoon from 3 to 6.

Apprentices and others under 21 years of age are allowed the use of the books gratis. About 24,000 books are annually lent to boys, and 7,000 to girls. The library is used regularly by about 800 boys and 250 girls.

Members pay $2 per annum, or $25 for life. The library is situated at the southwest corner of Fifth and Arch streets.

From the annual report of the managers, presented March, 1848, we gather the following additional statements:

"Mr. Thomas W. Goldtrap has bequeathed to the company one thousand dollars for the increase of the library.

"It is not the object of this company to swell the number of volumes in its libraries, for effect either at home or abroad. The sale, a year or two since, of about 2,000 volumes, will probably be followed by another when the present catalogue is disposed of. It is desirable that the libraries be kept fresh and attractive. Books as they are now prepared have a charm for youth, which the more ancient tomes do not possess; but it has been the care of your board to reject that spurious literature with which the market has been inundated by persons whose object appears to have been to make a book, regardless of historical accuracy No work of a known immoral tendency is ever admitted."

About 600 copies of a work published by the company, were, in 1847, distributed among the apprentices using the library.

The Athenæum Library—10,000 *vols.*—We are indebted to an address, delivered at the opening of the new hall of the Athenæum, October 18, 1847, by Thomas J. Wharton, esq., for the following facts respecting this institution: It was founded in 1813 by a few young men, "who, feeling the want of a convenient place of common resort in which their leisure hours could be passed without danger to morals or tastes, came together and arranged a plan for the establishment of reading rooms." On the 9th of February, 1814, when the articles of association were adopted, the number of subscribers amounted to 200; and on the [illegible]th of March following the institution was first opened to the public, in the room over the bookstore of Mr. Matthew Carey, at the southeast corner of Chestnut and Fourth streets. Chief Justice Tilghman and Mr. Du Ponceau each bequeathed to the Athenæum $200.

Dr. William Lehman, who died in 1829, bequeathed to the Athenæum the sum of $10,000 for the erection of a suitable building. This legacy, by the prudent management of the treasurers, amounted, on the 1st of January, 1847, to $24,845 45. It is now invested in the beautiful building occupied by the Athenæum, the Historical Society, and the controllers of the public schools. The society derives a permanent income of $2,000 from the rent of the rooms. The entire cost, including fitting up, &c., will be less than $50,000, leaving a debt, to be secured by mortgage, of less than $14,000.

"The whole structure is 50 feet front on Sixth street, 125 feet on Adelphi street, and 58 feet high. It is an excellent specimen of the Italian style of architecture, treated with spirit and taste. The first story is divided into offices, and a large room of 37 by 60 feet, 14 feet high, for the comptrollers of the public schools. The second story is arranged for the uses of the Athenæum, and is divided into a news-room, library, and chess room. The news-room is on the Sixth street front, and is 37 by 47 feet, and 24 feet high; it will be finished in pilasters, with an enriched cornice and cone to the ceiling. The library is 37 feet wide, 65 feet long, and 24 feet high, and will be finished with a columnar ordinance of the Corinthian order, advanced from the sides of the room, forming a centre cell or nave and aisles; the latter will be filled up with bookcases, set laterally from the pillars to the wall, and is designed at some future time to be finished with a gallery, as the library extends; the cornice will be enriched with modillions and ornament, the ceiling being in panel. The chess room is 18 feet square, and is an ante room between the two large rooms; a room of the same size over this is intended for the directors' room. The third story is divided into 8 rooms (three of large size;) one of them, to be occupied by the Historical Society, is 26 feet by 37 feet, and 14 feet high."

"A feature (says Mr. Wharton) of this institution, to which I would advert with complacency, but certainly without boasting, is the free admission which it has always afforded to strangers; meaning by this term, persons not permanently residing in the city, or within ten miles of it, introduced by members. It may be worthy of remark and remembrance, that, according to a register kept by our worthy and attentive librarian, more than 30,000 strangers have visited the rooms, and availed themselves of the facilities and conveniences which they afford. During certain years the number has exceeded 1,000 annually, including representatives of every civilized country and community.

"Whatever may be the deficiencies of our catalogue, in respect to the standard works of English literature, I believe it will not be easy to find, in this country, a more complete or various collection of periodical literature, from the daily journal, through the various monthlies and quarterlies to the annual registers. Our library consists now, (October, 1847) I am informed, of nearly 10,000 volumes. We receive 24 foreign journals, scientific and literary; and 25 American. We take 5 foreign newspapers, and 62 American; one at least, I believe, from every State.

"Among the curiosities of literature in our rooms is a large collection of pamphlets, bound into 148 volumes, which belonged to Dr. Franklin, some of them containing his manuscript notes and marginal remarks; and a regular series of the Journal de Paris, bound in volumes, and continued during the whole eventful period of the French revolution."

The Library of the Pennsylvania Hospital—10,000 *vols.*—The hospital was established in 1750. The first medical book possessed by this institution appears to have been a present, in 1762, from Dr. John Fothergill. It was Lewis's History of the Materia Medica. The next year it was determined to demand a fee from students attending the wards at the time of the physicians, visiting the patients, and to appropriate the money arising from thence to the founding of a medical library.

Prior to the Revolution about 100 volumes had been presented, and two orders for books had been sent to London. Only 11 volumes were added to the library from 1774 to 1787. One of these was a pamphlet; another, "Cullen's First Lines of the Practice of Physic, 2 vols. 8vo." "cost the apparently enormous sum of £135 5*s*. This, however, when subjected to the talismanic operation of Richard Wells's scale of depreciation, shrinks to the comparative trifle of £1 15*s*. specie!"

In the years 1787–'9 the amount paid for books was £266 5*s*. 11*d*. The total expenditure for books previous to 1790, was equal to $886 48. The first catalogue, published in the year 1790, contains of folios 21, quartos 77, octavos 341, duodecimos 89; total, 528 volumes.

The increasing number of students from this time has afforded a fund for the steady increase of the library. For several years the books were selected and purchased by the celebrated Dr. Lettsom, who enriched the collection with many valuable donations.

In the year 1800 Sarah Lane presented 142 volumes of medical books, some of them very rare and valuable. A supplementary catalogue was printed in 1793, and a new catalogue in 1806, containing 127 pages 8vo.

On the decease of Dr. Benjamin S. Barton, his extensive and rare collection of works on natural history was purchased of his widow for $2,270.

A supplement to the second catalogue was printed in 1818.

Another, and the last catalogue of the library, was printed in 1829, containing 324 pages 8vo. At this time the library contained 5,828 volumes. A supplement, paged continuously with the catalogue, from page 325 to page 426, was printed in 1837, at which time the library contained 7,300 volumes.

The catalogue is thus divived: Alphabetical catalogue of authors, pages 1–202; alphabetical catalogue of editors and translators, 203–211; inaugural theses, in two parts—1st, an index to the universities, and names of graduates; 2d, a general catalogue in the order of subjects, 213–241—periodical literature, memoirs of societies, under the names of places where printed, 243–257; anonymous publications, arranged under classes, 259–268; index to subjects—part 1, medical, surgical, and chemical, (alphabetically arranged) 269–308; part 2, natural history and miscellaneous, &c., 309–322.

The library at present contains about 10,000 volumes, and occupies a large and elegant room in the hospital. The books are mostly medical, and pertaining to kindred sciences. In these departments it is probably the most extensive and valuable collection in this country.

Library of the Law Association of Philadelphia—5,100 *vols.*—"In the year 1802 a few gentlemen of the bar associated themselves for the purpose of forming a law library, for the use of the profession in this city; and, partially by donations which they made, and partially by payments from members of the company, succeeded, by degrees, in forming a collection, which, with the small number of books formerly known, was all that was needed. With the increasing number of reports in modern times, the library, as originally organized, fell very far behind the professional requirements of the day; and in September, 1841, an effort was made by a number of gentlemen to enlarge the collection, and to place it, generally, upon such a basis as should make it more worthy of the bar to which it belonged. Between the 15th of October, 1841, and the 1st March, 1850, there has been laid out by the association, in the purchase of new books, the sum of $9,583 72, exclusive of $865 87, in which last sum is embraced the cost of binding such of them as were bought in sheets."

"The collection, we are happy to believe, is now complete in all those departments usually required in the practice of the law. There exists in it a series of all the English, Irish, and American reports—a department in which we believe that no other library, either in Great Britain or the United States, is equally perfect. The department of text books is also reasonably good; and, in addition to complete collections of the British statutes at large, and of the acts both of our State and federal legislatures, in their authoritative, unabridged condition, there will be found upon the shelves of this library such digests and works of general jurisprudence as have obtained, with the profession, any title to authority. As a means of professional culture, and of extending among the bar a knowledge of the judicial decisions of England and of the United States, the collection affords all that as yet is practicable, and much of all that can at any time be desired.

"In the course of nearly fifty years which has passed since this library was founded, neither the State, the county, nor the city, have contributed a dollar to its increase; and while, even in its present condition, the payment of a sum merely nominal makes the least opulent practitioner among us the possessor of a library larger than any which the most wealthy owns, it is yet certain, that as a public library, answering all the demands of a numerous and intellectual profession, stimulated by the keen spirit of ambition and reward, and pushing its investigations through every avenue of knowledge, the collection is yet far in arrear of what it might be. There are some departments in which it is entirely wanting, and others where it is very imperfect. The civil law has no place in it at all, and the canon and ecclesiastical law have much too small an one. There is also a large class of books which do not come exactly within the title of law books, that yet belong to the law, considered as a philosophic science, or as a system of lofty morals. They are sometimes cited in courts, and would form, at any rate, a graceful addition to a library which represents in its corporate dignity an intellectual and elevated profession." [See circular letter of a committee of the Law Association.]

About 2,000 dollars a year are expended in the purchase of books. There is no vested fund. The income is derived from assessments of members and occasional contributions.

The library occupies a room 50 feet square, in the county court-house. The last catalogue, containing 64 pages 8vo., was printed in 1849.

The following are the most important rules of the library:

"The library is open from 10 o'clock a. m. till 3 p. m., and from 4½ till sunset, daily throughout the year, excepting during the months of July and August, on Christmas and New Year's day, the 22d of February, and on Saturday afternoons and Sundays; at which times it is closed.

"The following persons are allowed to use the library:

"1, members of the association and subscribers to the library; 2, judges of the court sitting within the city; 3, members of the bar from the country, attending the sessions in this city of the supreme court of Pennsylvania, or of the circuit court of the United States.

"Persons desirous of using this library can have the use of it for life, free of any annual charge, by paying the sum of $100. Or they may become members of the association by paying $30 in the first instance, and afterwards an assessment of $10 a year.

"Gentlemen of the bar who are not members of the association, nor subscribers for life to its library, may become subscribers to it annually by paying, during the first two years after their admission to the bar, $6 a year; during the ensuing two years, $8 a year; and afterwards, $12 a year.

"No book can be taken from the library-room by any person whomsoever, except for the purpose of being used in the court rooms. The present librarian is John William Wallace, esq."

The Library of the Franklin Institute, of the State of Pennsylvania, for the promotion of the mechanic arts, was founded about the year 1830, and contains 1,300 volumes, not including pamphlets. The apartment occupied as the library and reading-room of the society is 45 feet by 44. A catalogue was printed in 1847, containing 117 pp 8vo. The library is open every day, except Sunday, from 9 o'clock a. m. till 10 p. m. It is intended primarily for the use of the members of the institute. The books are lent out. Not less than 1,000 annually consult the library without taking away books. The library is but an auxiliary means of producing the effects desired by the institute—the improvement of its members—and is not made or considered a separate branch or department. It is intended, like the collections of models, machines, &c., to be open for constant reference to the members and their friends. William Hamilton, actuary and *ex officio* librarian.

Library of the German Society—7,341 *vols.*—This library contains both German and English books. A catalogue (218 pp. 12mo.) was printed in 1839. [Ludewig.] It is now said to contain nearly 18,000 volumes, (January, 1851.)

The Library of the four monthly meetings of Friends, of Philadelphia, was founded in 1741, by a bequest of Thomas Cheekley. A catalogue (150 pp. 8vo.) was printed in 1831. [Ludewig.]

College of St. Thomas of Villanova, near Philadelphia.—This is a new institution, chartered in 1847. It has no regularly organized library, but possesses about 2,000 books of all kinds. J. P. O. Luzen, O. S. A., president.

Library of the University of Pennsylvania--5,000 *vols.*—The University was founded in 1750. The library at present contains about 5,000 volumes. A catalogue (103 pp. 8vo.) was prepared and printed in 1829, by Judah Dobson. The following facts are stated in the preface:

"This library was begun by private donations of the friends of the institution; among whom the Rev. William Smith, the first provost of the college and academy, and Dr. McDowell, one of his successors, deserve to be particularly noticed. During the revolutionary war our little collection was enriched by a donation in books from his Majesty Louis the Sixteenth. Those books, printed at the royal printing office, consist chiefly of mathematical works; of works on natural history, among which is a collection of M. Buffon's; and some of the Byzantine historians. They have been all carefully preserved, and will, it is hoped, long remain a memorial of the liberality of that great and unfortunate monarch."

The Philomathean Society of undergraduates, founded in 1819, possesses a library of about 3,000 volumes. The Zelosophic Society, founded in 1829, has a library of 1,250 volumes.

Library of the American Baptist Publication Society—1,032 *vols.*

The Library of the Historical Society--1,728 *vols.*—The Historical Society of Pennsylvania was founded in 1825. The library contains 1,728 volumes, including 47 volumes of bound manuscripts. The society also has collections of medals and coins. Most of the books have been received within the last five years, and principally by donation. The library is kept in the hall of the society, a room in the third story of the Athenæum, about 29 by 42 feet in size. The books are arranged according to subjects. The shelves are distinguished by letters, A, B, C, &c., and each shelf has a distinct series of numbers, commencing with No. 1. The first part of the catalogue was printed in 1849. It contains 36 pages 8vo., and comprises the departments of history, biography, and manuscripts. The library is open on the evenings of the meetings of the society, namely, the second Monday of each month, and is accessible to the members of the society, and only by courtesy to others. No record has until lately been kept of the use of the library. William Duane, librarian.

The following notice prefixed to the published catalogue gives some additional facts respecting the library:

"The Historical Society of Pennsylvania was founded in 1825. It met for nineteen years in one of the rooms of the American Philosophical Society, and had the use of a small closet in this room to contain its books. In the year 1844 the society removed to a room rented by itself for its exclusive accommodation. Its collection of books then amounted to about sixty volumes, in addition to some boxes of public documents from Washington, which had not been opened, as the society had no place in which to place the books. Immediately after the removal, the library increased rapidly, and a still further increase has followed its removal to their present location in the Athenæum building, south Sixth street. The library now amounts to about 1,750 volumes, divided into ten classes: history, biography, manuscripts, pamphlets, periodicals, voyages and travels, newspapers, public documents of Pennsylvania, public documents of the United States, and miscellaneous. These observations have been considered necessary to explain why a society twenty four years in existence has not a larger collection of books. Had it not been for the cramped position it was compelled to occupy before it had a room of its own, it would doubtless have long since reached its present size.—*January* 10, 1849."

An address before the society, delivered by William B. Reed, on the occasion of opening the hall in the Athenæum, January 28, 1848, has been printed, and contains some interesting facts concerning the society, besides valuable remarks and suggestions respecting the objects of such an institution.

PITTSBURG.

The Young Men's Mercantile Library and Mechanics' Institute—1,188 *vols.*—Founded September, 1847; incorporated March, 1849. The library contains (January 1, 1850) 1,188 volumes, a small collection of engravings, and about 353 mineralogical specimens. A reading-room of valuable journals is connected with the library. Since the establishment of the institution, about 500 volumes have, each year, been added to the library, and about 450 dollars been expended in the purchase of books. The association occupies two rooms, each 29 by 55 feet, forming the 2d and 3d stories of a well-built brick building. A catalogue is in preparation.

The library is open daily from 8 a. m. till 10 p. m.

The persons entitled to the use of the library are: members by the payment of $4 per annum; life members by the payment of $35 at one time; and honorary members elected by the directors.

About 2,200 books were lent out during the last year. J. Finney, jr., president.

Theological Seminary Library—1,500 *vols.*—This seminary was incorporated in 1828. It is under the direction of the Associate Reformed Church.

Washington College Libraries—3,300 *vols.*

WESTCHESTER.

The Chester County Cabinet of Natural Sciences, at Westchester, Pennsylvania, was founded in March, 1826, and incorporated in 1831. Its library contains 450 volumes, of which 150 are works on the natural sciences, chiefly botany, zoology, and geology; and 300 miscellaneous, general science, languages, and literature. It has a collection of original letters, from the principal general officers of the American army of the Revolution; and also the autograph signatures of 103 distinguished patriots of the Revolution, military and civil, cut from their letters to Gen. Anthony Wayne—all presented by his son, the Hon. Isaac Wayne. It also has several charts of the coast survey from Professor Bache; a very few engravings and medals, and about 400 coins, (300 copper and 100 silver,) among which are 86 silver and 59 copper coins from 21 different governments, collected during the circumnavigating cruise of the United States ship Peacock, in 1835–'37, by the late Lieutenant Darlington, United States navy, and presented by him. The additions to the library have been made very irregularly, and probably do not average more than 15 or 20 volumes annually. There is no regular expenditure for books. The greater portion of the books has been obtained by donation. A three-story brick hall, roofed with tin, was erected in 1836 for the use of the "Cabinet," and to contain its library and museum. The cost of the building was upwards of $5,000. The hall of the "Cabinet" is 40 feet front by 50 feet deep; the lower story is fitted for a lecture room, with a larboratory in the rear. The second story is a large room calculated for an athenæum, or reading room; and the third story contains the museum and library of the "Cabinet." There is no printed catalogue. The library is accessible to all the members at each meeting of the "Cabinet." The books are lent out to members, when applied for.

The Chester County Cabinet of Natural Science, in addition to the library, &c., possesses one of the best and most extensive collections of minerals in Pennsylvania; a splendid collection of *shells*, and of English and American *birds*; a *herbarium* of *seven thousand species of plants*, duly arranged, labelled, and catalogued; with various curiosities in nature and art. William Darlington, M. D., president.

The Chester County Athenæum was founded February 9, 1827, and incorporated in 1828. The library contains 1,431 volumes, consisting of works on history, biography, natural science, travels, and the usual assortment of books proper for a village library. Until within the last six years the institution was neglected; within that time, by the exertion of some public-spirited individuals, it has been resuscitated, and the annual increase is now from 130 to 160 volumes, and the annual expenditure for books from 110 to 140 dollars. There is a written, but not a printed catalogue. The library is open every day, at all hours till 8 o'clock in the evening. The members and subscribers are entitled to the use of the library on the following terms:—stockholders pay each $2 per year; subscribers $2 per year; minors $1; transient subscribers 6 cents per week for duodecimos, 8 cents for 8vos. The number of books taken out for the last three years has ranged from 1,300 to 1,600 annually, and is increasing each year. Any respectable person can have the opportunity of consulting the library, or taking home the books. William Darlington, librarian.

DELAWARE.

DOVER.

The State Library, and the Law Library, contain, together, about 4,000 volumes. Since 1837 a room in the capitol has been devoted exclusively to the use of the library. Occasional appropriations are made by the legislature for the increase of the collection. About 100 volumes have been added annually for the last ten years. Books may be freely used by any citizen who subscribes the rules. Samuel C. Letherbury, librarian.

NEWARK.

Delaware College Libraries—8,700 *vols.*—The college was founded in 1833. The college library contains 2,500 volumes. There are two societies of undergraduates, with libraries of 1,500 volumes each. The private library of the president contains 2,000 volumes; and the private collections of two other members of the faculty contain 1,200 volumes. These are all in the college building, and form an aggregate of 8,700 volumes, accessible to all persons connected with the college; and indeed to others who may wish to use them for literary purposes. An effort is making to enlarge the college library. Rev. James P. Wilson, president.

NEWCASTLE.

Public Library—4,000 *vols.*—The Newcastle Library Company was founded in 1812. The library contains about 4,000 volumes. It is sustained by an annual assessment of $2 on each share. The price of a share is $20. The library at present occupies a room in the town academy. Samuel Guthrie, librarian.

MARYLAND.

ANNAPOLIS.

The State Library—15,000 *vols.*—The State Library of Maryland was founded in 1827, and contains 15.000 volumes, besides 59 volumes of manuscripts, 108 maps, 19 charts. The yearly average number of volumes added to the library for the last ten years is 580. There has been an annual appropriation by the legislature of $500. There is also in operation a system of exchanges with other States. The library occupies a room in the State-house. A catalogue (132 pages 8vo.) prepared by David Ridgely, then librarian, was published in December, 1837, at Annapolis. The titles are classified under 37 chapters. The arrangement of the books upon the shelves corresponds with the divisions of the catalogue. The library is opened daily (Sundays excepted) during the sessions of the legislature, from 9 o'clock a. m. to the time of the daily adjournment of both houses, and from 5 to 9 p. m., except during night sessions, when it is kept open till the adjournment. The governor, chancellor, judges, State officers, members and ex-members of the legislature, lawyers practising in the court of appeals, and officers of the army and navy stationed at Annapolis, can take out books. Any person may consult the library in the room. No record has been kept of loans or of visitors. Richard Swann, librarian.

St. John's College Library—3,292 *vols.*—The library dates, with the college, from 1784, and contains 3,292 volumes. Occasional appropriations are made by the board for the increase of the library. The collection is in a room of the new brick college, 36 feet by 15, in 7 alcoves. The books are arranged according to subjects; only one catalogue has been printed—date 1847, pp. 38. The library is opened one hour every Saturday. All persons connected with the college are entitled to use the books; and they are occasionally lent, by courtesy, to others. About 800 volumes are lent in a year. William D. Greetham, librarian.

BALTIMORE.

The Baltimore Library—15,000 *vols.*—The Library Company of Baltimore was founded in 1796, and possesses 15,000 volumes of printed books and five volumes of manuscripts: among them "Aristotelis Physica," 1312, and "Nic. de Lyra, *Matth.*" of the middle of the 14th century, with beautiful illuminations; 20 collections of maps and charts; 100 volumes of engravings. The income of the institution is derived from the annual payments of stockholders (about 265) and annual subscribers, and amounts to about $1,100 per annum. The building was erected in conjunction with the Maryland Historical Society and the Mercantile Library Association, and was a gift from the citizens of Baltimore. (See Maryland Historical Society.) The rooms of the Library Company are upon the second story of the edifice, and consist of a library 47 by 53 feet, height 20 feet, with a gallery. Adjoining, at one end, is a directors' room, 14 by 16 feet; at the other end is a reading-room, 26 by 47 feet; and beyond that another, 14 by 32 feet. A catalogue was printed in 1798: a second in 1802; and a third in 1809. The last mentioned contains 196 pages 8vo., and has been continued by supplements—the first in 1816, of 36 pages; the second in 1823, of 40 pages; the third in 1831, of 21 pages; the fourth in 1841, of 28 pages. The library is open daily, except Sundays and certain holidays, in summer from 8 a. m. to 6 p. m., in winter from 9 a. m. to 4 p. m. Persons entitled to the use of the library are: stockholders paying $100 for a "free" share, or $30 for a share and $5 per annum, and subscribers at the rate of $8 per annum, or $1 per month. About 5,000 books are lent out each year. Perhaps 100 persons, each year, consult the library without taking away books. About 400 visitors each year. John S. Sumner, librarian.

St. Mary's College Library—12,000 *vols.*—The library was commenced with the institution in the year 1809, and contains about 12,000 volumes; a few manuscripts, among them a modern 4to. MS. entitled "Tableau présent des Etats Unis par George Novion," in 369 elegantly written pages, with statistical tables: date, about 1791–2; some valuable maps, charts, and engravings. The annual increase is about 500 volumes. The library occupies two large rooms in the college edifice. The librarian is engaged in classifying the books according to subjects. There is no printed catalogue. A complete MS. catalogue is in preparation. There is no stated time for opening the library, but it is accessible at all times on application to the librarian. All persons connected with the institution are entitled to the use of the books, and others are allowed the use on application. Books are sometimes lent out to read, but the practice is discountenanced at present on account of former abuse of the privilege. With the permission of the superior, books may be lent to persons at a distance. Rev. M. Feller, librarian.

This is a very excellent library, composed for the most part of theological and classical books, but not deficient in other departments.

There is a small library of some 600 volumes belonging to a society of students.

The Mercantile Library—9,000 *vols.*—The Mercantile Library Association of Baltimore was established November, 1839, and incorporated January, 1842. The library contains (June, 1850) 9,000 volumes of books, 1 volume of autographs, 20 maps, 15 framed engravings, 25 volumes of engravings. The yearly average increase is about 700 volumes; the annual expenditure for books $700. The library occupies the ground floor of the Baltimore Athenæum. (See Maryland Historical Society.) Its rooms correspond with those of the Library Company. A short catalogue, alphabetical, was printed in 1842, and a supplement in 1844. Another catalogue (118 pages 12mo.) was printed in July, 1848. The library is opened every day from 11 a. m. to 2 p. m., and from 3 to 10 p. m. Active members (who must be clerks by profession) pay for the privileges of the library $5 for the first year, and $3 for each succeeding year. Honorary members (all persons other than clerks) pay $5 per annum. James Green, librarian.

The following table, compiled from the first six annual reports of the association (all that have been printed,) exhibits the early progress of the institution. The last line shows its present condition:

	No. of volumes in library.	Dollars expended during year for books.	Honorary members.	Active members.	Use of library.
					Volumes.
November, 1840...	1,400	1,400	141	125	2,314
Do....1841...	2,100	800	150	262	4,204
Do....1842...	2,839	890	122	312	....
Do....1843...	3,610	640	....	303	5,805
Do....1844...	4,393	854	112	361	7,800
Do....1845...	5,221	544	....	571	8,500
June, 1850........	9,000	700	250	450	10,069

The Maryland Historical Society was founded in 1843, and incorporated March, 1844. The library contains 1,500 volumes, principally historical, and 270 volumes of newspapers, published mostly in Maryland. The set of the Maryland Gazette commences in 1728, and, though this is imperfect, a complete series of papers printed in Maryland from that time to the present, exists in the library. The collection of manuscripts, though not large, embraces many of value and interest, especially those placed under the care of the society by the State legislature, as the journals of the old council, and letters to and from the governors and the proprietors. Among the MSS. are also several unpublished orders of General Washington, and some valuable letters from officers of the Maryland line, with regard to the southern campaign. A large and commodious building has been erected for the joint accommodation of the Maryland Historical Society, the Library Company of Baltimore, and the Mercantile Library Association. The Maryland Historical Society holds in fee the third floor of the Athenæum building; and this floor is divided into four inter-communicating apartments: a room for the use of the officers of the society, which is 14 feet by 23; a meeting room and library, 26 feet by 47 and 23 feet high; a gallery of fine arts, 47 feet by 53, with a ceiling 23 feet high at the apex and sloping to 20 feet at the walls, lighted by a skylight in the roof, affording 400 superficial feet of glazed surface; and a gallery for sculpture and casts from the antique, 14 by 23 feet. The rooms of the society are furnished in an elegant manner, with solid oak cases, tables, and chairs. The whole cost of the building was $28,182. The furniture is valued at $8,000.

As yet no regular catalogue of the library has been prepared for printing. The library is open daily from 10 in the morning until 6 o'clock in the afternoon. The regular meetings of the society are held upon the first Thursday evening of every month. The members of the society are, of course, entitled to the use of the library; but as the object of the institution is not only to collect valuable material, but to make it as generally useful as possible, the books, original papers, &c., are at all times open to the examination and perusal of all who may wish to refer to them, subject only to the observance of such rules as are essential to their preservation. The books are not allowed to be taken from the rooms, except under circumstances which appear to justify a departure from the rule; because, the library being chiefly valuable for purposes of reference, it is thought desirable that investigations should be conducted in the rooms as much as possible; and much inconvenience would result to the many from this partial accommodation of the few. The number consulting the library is large, though it cannot be exactly stated.

One of the prominent features in the plan of the society was the establishment of chapters in the different counties of the State. It is hoped that this novel but admirable project may, ere long, be realized. Francis B. Mayer is the acting librarian.

From a letter of J. Morrison Harris, esq., corresponding secretary of the Historical Society, besides the foregoing statements, we quote the following passage, explanatory of the views of this energetic association, in the establishment of the gallery of art:

"The gallery of fine arts is intrusted to a committee who are elected to serve for one year, and who make all the arrangements connected with exhibitions, &c. As this feature is not exactly connected with the purposes and legitimate plan of an historical society, it may be well to say something in explanation of its connexion with our society. The idea was first suggested by an effort which the society made, some years since, and still continues, to procure the originals or copies of the portraits of distinguished men connected with the founding of the colony, the events of its early history, and eminent in their associations with its annals down to the present time. Our plan is to raise, by yearly exhibitions of good pictures, a fund which will, by degrees, enable us to build up a gallery of our own, consisting of good copies of the best pictures of the old masters, and original pictures of merit by native artists; and we cherish the confident hope that, while the prosecution of this scheme will in no way interfere with our historical labors, it will enable us to throw open, hereafter, to the man of taste and to the student, a well selected collection of paintings, which will produce upon the community those good effects inseparable from an elevated appreciation of art."

The following is from the annual report made in February 1, 1849, by J. Spear Smith, esq., president of the society:

"In the original project of the Athenæum, it was deemed not only proper, but essential, to embrace within it a gallery of fine arts. Various attempts had previously, and at different epochs, been made, to form and sustain societies connected with the subject, and in the hope of introducing the desirable accompaniment of a permanent gallery; but, notwithstanding the zeal and talent with which these meritorious essays were made, they failed of being attended with commensurate success. If, therefore, such an opportunity as was now offered were permitted to escape, the day seemed distant when Baltimore would be in the enjoyment of so attractive an addition to her public institutions. There existed also a confident belief that, under the strong protection of the society, it could be alone instituted and successfully maintained. It was, consequently, no accidental circumstance which led to the union of a gallery with the society, nor did it arise from any difficulty in the disposition of the space allotted to it. Being thus an element in the primary scheme, the architect was instructed to incorporate in the plan an apartment adapted in its proportions, and in the proper admission of light, to this object. This was successfully accomplished, and with so much judgment as to have elicited the decided approbation of connoisseurs, and others versed in such matters. In accordance with the original design, the gallery fell under the administration of this society. This disposition of it seemed appropriate for many reasons, not the least of which was the connexion, for the most part, of the productions of the painter and sculptor with historical persons or events. It was intended, also, to increase the attractions and popularity of the society, by affording an agreeable and tasteful relaxation to its members."

The Odd Fellows' Library—3,541 *vols.*—The Odd Fellows' Library was established in 1849, though some books had been collected for the purpose several years before. Last year, upwards of a thousand dollars were expended for books. An appropriation is regularly made from the funds of the different lodges, but no member is taxed additionally for the support of the library; yet every one has the full use of it. The Grand Lodge has appropriated a large room—about 60 feet by 20—on the first floor of the hall, for its use; but it is hardly large enough to accommodate the numerous visitors. The hall is soon to be enlarged, and then, it is supposed, a fine suite of rooms will be assigned to the library. The only catalogue published, as yet, is one of the German books, (812 in number.) The library is open every evening, except Saturday, from half-past 7 to 11 in summer, and from half past 6 to 10 in winter. All the members of the Order in Baltimore (about 8,000 in number) are allowed the use of the books without charge. The circulation for one quarter ending July, 1850, has been 2,331 volumes. John Shotton is librarian.

Baltimore Female College.—This institution was incorporated in 1850, with power to confer degrees; it is located in St. Paul's street. It possesses a well-selected library of 2,800 volumes, to which the older pupils have access. There is also a valuable collection of minerals, and a cabinet of ancient and modern coins. Of ancient coins there are more than 500. [See catalogue of the B. F. C. for 1850.]

Library of the Medico-Chirurgical Society—2,000 *vols.*

Library of the Medical Department, University of Maryland—1,000 *vols.*

Law Library—1,000 *vols.*

Several of the Fire Companies in Baltimore possess valuable collections of books. The libraries of the Mechanical Fire Company and of the Patapsco Fire Company number about 1,000 volumes each.

Mechanics' Institute Library—1,000 *vols.*—"The Maryland Institute for the Promotion of the Mechanic Arts" was founded in 184–, and incorporated in 1849. It receives an annual grant of $500 from the State. It has held three annual exhibitions of American manufactures. It supports a course of lectures during the winter months, and has established a school of design, which promises to be an important and highly useful branch of the institute. Among the objects of the association is the collection of a library. About 1,000 volumes have already been obtained, and vigorous efforts are making to increase the number. The institute is contemplating the immediate erection of a building for its purposes.

CHESTERTOWN.

Washington College Libraries—1,100 *vols.*—The College Library was founded in 1783. In 1827 the college was burned down, and only 170 volumes rescued from the flames. In 1844 the college was revived, a new building erected, and 380 new volumes added. These, together with the valuable present of State papers, and other documents, by Hon. J. A. Pearce, form an aggregate of 1,000 volumes, with some good collections of maps, &c. No yearly appropriation of money for the increase of the library has, as yet, been made, in consequence of the determination of the board to erect new buildings. After these are finished, a liberal sum will be set apart for the purchase of books. There is a manuscript, but no printed, catalogue. Persons connected with the college are allowed the use of the books without fee. Strangers are sometimes, by courtesy, permitted to use the library. S. S. Rogers, librarian.

The Mount Vernon Society of Students, founded in 1847, has about 100 volumes.

EMMETSBURG.

Mount St. Mary's College Library—4,000 *vols.*

HAGERSTOWN.

St. James College Libraries—3,500 *vols.*

The College Library contains - - -	2,500	volumes.
The Library of the Belles Lettres Society contains	500	"
The Irving Society Library contains - -	500	"

ROCKVILLE.

The Montgomery County Library Association, founded in 1849, has a commencement of a library (115 volumes.) The money received by annual subscriptions will be devoted to the increase of the collection. Arrangements have been made for fitting up a room in the building formerly occupied as the county clerk's office for a library and reading room. The library is open daily from 9 to 3 o'clock. Persons become members of the association by subscribing to the constitution, and paying a small initiation fee. O. W. Treadwell, librarian.

The *Academy* at Rockville has a small library, containing about 150 volumes, for the use of the students.

SANDY SPRING.

Sandy Spring Library Company.—This library, founded in 1841, contains about 500 volumes. About 70 volumes are added each year, and about 40 dollars expended for books. A catalogue was printed some six years ago, containing 12 pages 12mo. The library is open daily from 6 a. m. to 10 p. m. It is restricted to members of the company, who pay five dollars for a share, and $1 50 annual subscription. Joseph Gilpin, librarian.

DISTRICT OF COLUMBIA.

GEORGETOWN.

College Libraries—26,100 *vols.*—The library of Georgetown College dates from the foundation of the college, in 1792, and contains at present 25,000 volumes. Many duplicates have been given to kindred institutions, and a valuable collection of astronomical works has been taken from the library and placed in the observatory attached to the college. About $350 a year are expended for books. The library is kept in a room 33½ by 26 feet, most tastefully arranged with shelves of Brazilian wood, birds'-eye maple, curled maple, &c., the work of one of the members of the institution. There is also an octagonal room for state papers, journals, &c. No catalogue has been published, but one will soon be put to press. The books are arranged according to subjects. Only the faculty and students of the higher branches are entitled to take books from the library, and the person borrowing the book is strictly prohibited from lending it to any person, *even in the college.* Books are very seldom lent out of the college; owing to the loss of several works, great caution is exercised in lending. Rev. J. M. Finotti, librarian.

The Philodemic and Philonomosian Debating Societies have libraries of books in general literature, in all upwards of 1,100 volumes, purchased with the subscriptions of members, or presented by members on their admission to the societies.

The college library is one of the most valuable in the country, particularly in theology and the classics. It contains a complete set of the Acta Sanctorum, the Church Fathers in the Benedictine editions, and many works of great value and rarity, at least in this country.

WASHINGTON.

The Library of Congress—50,000 *vols.*—The first Library of Congress was founded April 24, 1800. It was collected under the direction of Dr. Mitchell, Mr. Gallatin, and others, and consisted of about three thousand volumes, when it was destroyed by the British army on the 24th of August, 1814. It was a valuable collection, and was much resorted to in the early days of the city. The total loss of the library induced Mr. Jefferson to offer his collection to Congress. It was purchased in 1815. It consisted of about 7,000 volumes, for which Mr. Jefferson received $23,000. It formed the nucleus of the present library, which contains (January 1, 1850) about 50,000 volumes, a few manuscripts, a series of medals designed by Denon and executed by order of the French government, commemorative of events during the reign of Napoleon; some valuable maps and charts, and busts of several of the Presidents, with a few paintings of interest. The yearly average increase is about 1,800 volumes. $5,000 per annum are appropriated by Congress for the purchase of miscellaneous books, and $1,000 for law books.

The library occupies three rooms in the Capitol, only one of which was originally designed for the purpose. The principal library-room is 92 feet in length, 34 feet in width, and 35 feet in height. It contains 12 alcoves—6 on each side—divided by a gallery. The books are arranged according to subjects, on the system of Bacon. Catalogues have been published as follows: In 1802 (10 pp. 8vo.;) supplement, 1803 (3 pp.) and 1808 (41 pp.;) in 1812 (101 pp. 8vo.;) in 1815 (170 pp. 4to., containing Jefferson's library;) supplement, 1820 (28 pp.;) and in 1830 and '31 (362 pp. 8vo.)

The last catalogue was printed in 1840 (747 pp. 8vo.) The additions since that time are in annual supplements. A new catalogue is in press.

The library is open every day during the sessions of Congress. During the recess it is opened on Tuesday, Thursday, and Saturday of each week, six hours each day. Members of Congress, the President and Vice President of the United States, Heads of Departments, Judges of the Supreme Court, Secretary of the Senate, Clerk of the House, agents of the Library Committee, and Foreign Ministers, are entitled to the use of the library, and are allowed to take out books. The number of books annually lent out is not known, nor can the number of persons consulting the library be stated. It is very great during the sessions of Congress. John S. Meehan, librarian; E. B. Stelle and C. H. W. Meehan, assistants; Robert Kearon, messenger.

In the catalogue the works are classed according to the system of Lord Bacon. This system was introduced by Mr. Jefferson, and, unfortunately, has been continued here, after its abandonment in most other libraries. It was not intended by its author as a bibliographical system, nor has any improvement which it has received rendered it convenient or useful for that purpose.

The Library of Congress is one of great value. It is worthy of a minute and accurate catalogue. It would be comparatively useless without one, were it not for the catalogue of its contents written upon the memory of the librarians. In a catalogue of the Library of Congress every book, pamphlet, map, handbill, speech, and important article in a review or magazine, should be entered carefully and accurately under the name of its author, and alphabetical and analytical indexes of subjects should be made. The catalogue should be a model performance. Such an one should not, of course, be required from the present force employed in the library, which is not sufficient for the regular work of the establishment. The making of a catalogue should be a separate affair.

The librarian is appointed by the President of the United States, and is governed by rules adopted by the President of the Senate and the Speaker of the House of Representatives. A joint committee of the two houses is charged with the purchase of the books.

Library of the House of Representatives—12,000 *vols.*—Besides the Library of Congress, there is in the Capitol a library for the use of the members of the House, consisting mostly of public documents, and containing several sets, nearly complete, from the first commencement of the government. The aggregate number of volumes is at present upwards of 12,000. The annual increase is about 400 volumes. The library occupies a series of closets, triangular rooms, and attics, near the hall of the House. It is open daily while the House is in session, and is the constant resort of members, who alone are entitled to the use of it. There is no printed catalogue, but one in manuscript. Philip Williams, librarian.

Library of the State Department—7,000 *vols.*—The library commenced with the "Department of Foreign Affairs," in 1781. It contains at present about 7,000 volumes and 500 pamphlets. The number of maps and charts unbound is about 1,500. The annual increase is about 50 volumes. About $100 are expended for books. The library is in the building of the department, and occupies two rooms. The larger is 36 feet long, 15 feet 9 inches wide, and 14 high, divided on one side into seven alcoves. The smaller room is 17 feet by 15 feet 9 inches. A catalogue was printed in 1825, (small 8vo. 67 pp.,) and another in 1830 (small 8vo., 150 pages.)

Besides the public library of the State Department, there is a large collection of manuscripts relating to the history of the country, in the archives of the department. The number cannot now be accurately stated.

Copyright books—State Department.—Since May 31, 1790, when the first copyright act was passed, books and other articles have been accumulating in the State Department, deposited there in accordance with the provisions of the law. They number at present about 10,000 volumes, besides maps and charts; over 3,000 pieces of music, and more than 800 lithographic prints and engravings.

The average annual increase of books for the last ten years has been about 400 volumes. These articles are kept in two rooms in the State Department, each about 18 by 21 feet and 12 feet high. They are arranged in close presses, according to their subject-matter. There is no complete catalogue. The rooms are open from 9 o'clock a. m. to 3 p. m. on office days. The books are not lent out. But few persons consult the library—probably not more than 50 a year. Charles E. Weaver, librarian.

The Library of the War Department, Washington, was organized about the year 1832, when Lewis Cass was Secretary of War. It contains about 7,000 or 8,000 volumes, all the government medals, (50 or 60 in number,) and is well supplied with maps and charts. About $2,000 has for the last ten years been the average annual expenditure for the purchase of books. The library occupies a room in the War Department 50 by 18 feet, handsomely furnished. It is open every day, excepting Sunday, from 9 to 3 o'clock. The heads of departments and bureaus, officers of the army and navy, foreign ministers, and the clerks of the War Department, are entitled to the use of the books, and are allowed to take them from the library. Charles Lanman, librarian.

Columbian College Libraries—6,200 vols.—The library of the Columbian College was founded in 1821. It contains (January, 1850) about 4,500 volumes, and some maps, charts, and engravings. The yearly average increase is about 50 volumes. The collection of a fund for the library has been commenced. The librarian is now preparing a catalogue for the press. The library is opened once a week, and kept open several hours. Officers, students, trustees, and such other persons as they may recommend, may use the books.

There are two societies of students connected with the college, possessing in their libraries about 1,700 volumes.

Library of the Navy Department.—The Navy Department has no regularly organized library. There are, however, valuable collections of books in the office of the chief clerk, in the Bureau of Ordnance and Hydrography, in the Bureau of Yards and Docks, and in the Bureau of Construction. In all there are not less than 3,000 volumes, including Congressional documents.

The Library of the Patent Office contains about 6,000 volumes. A catalogue was printed in 1847, (34 pages 8vo.) The library has greatly increased since that time. It contains a valuable collection of works on chemistry, agriculture, technology, engineering, &c.; complete series of many valuable scientific periodicals; the best encyclopedias, English, French, German, &c. It is in a room in the Patent Office, and under the care of a librarian appointed by the Commissioner of Patents.

Treasury Department—2,000 *vols.*—Books have, from time to time, been procured by occasional appropriations by Congress, for a library of the Treasury Department. Until the present year, however, no such institution has been regularly organized. Very recently Mr. John Taliaferro, of Virginia, has been appointed librarian; a room in the Treasury building, 60 feet by 26, has been appropriated and fitted up for the collection; and measures have been taken for establishing a library upon a permanent foundation, and procuring for it books important to the officers of the department, for whose use the library is principally designed.

The Library of the Engineer Department contains about 1,700 volumes, including Congressional documents, of which the sets are nearly complete since 1805, many manuscript official reports, and a large number of maps and charts relating to the defences of the country. The yearly average increase is about 50 volumes. Books are purchased out of the contingent fund of the department, annually granted by Congress. The library is in the office of the Chief Engineer, Winder's building, and is open every day from 9 to 3 o'clock. Books are lent to the officers of the department, the clerks, and to other persons by courtesy. The assistant to the Chief Engineer is *ex officio* librarian. The present officer is Captain Frederick A. Smith, United States engineers.

Washington Library—5,000 *vols.*—The "Directors of the Washington Library Company" were incorporated by act of Congress, approved April 18, 1814. The library contains about 5,000 volumes, and increases at the rate of about 50 volumes per annum. The price of a share is $12, subject to an annual assessment of $3. The library is open daily from 3 o'clock till 6 p. m. A catalogue was printed in 1835, containing 75 pages 12mo.

The Library of the Smithsonian Institution—6,000 *vols.*—The Smithsonian Institution was established by act of Congress, 10th August, 1846, upon a fund bequeathed by James Smithson, esq., of England. The act of Congress provides that the Board of Regents, to whom is intrusted the management of the institution, shall make an annual appropriation, not exceeding $25,000 a year, for the collection of a library. By a resolution of the Regents the whole income of the institution is to be perpetually divided into two equal parts; one-half to be devoted to the publication of memoirs, reports, &c., the instituting of researches, and the support of lectures, &c.; the other part to collections in science, literature and art. Common expenses are to be divided equally between the two departments. As the museum and cabinet will require but small annual appropriations, the greater part of the half of the income devoted to collections will be expended for a library. From this provision, and from gifts, exchanges, and bequests, we may justly hope to see, ere long, upon this foundation a library worthy of the United States of America—one which shall release us from a provincial dependance in literary matters upon the libraries of Europe. As a full account of the collection at present belonging to the institution will be found in the librarian's report (to which this is an appendix,) it is unnecessary to give further details in this place. The library is open daily, during business hours. The books are accessible to all who wish to use them in the room. The use of the library is already considerable. The number of visitors is very great. C. C. Jewett, librarian.

The National Institute for the Promotion of Science was founded at Washington in May, 1840, and incorporated by act of Congress, approved 27th July, 1842. The library contains 3,173 volumes and pamphlets. It has three manuscripts, viz: two Arabic, and one illuminated Latin. There are, also, considerable collections of maps, charts, and engravings. In the cabinet are many medals, coins, &c. The library has been received entirely by donation and exchange. It is of course quite miscellaneous; but it contains many valuable scientific and historical works, and transactions of learned societies. Many useful and costly books have been obtained for the institute by Mr. Alexandre Vattemare, the well known advocate of the system of international exchanges. The library occupies, temporarily, a room, 22 feet square, in the Patent Office of the United States. There is no printed catalogue, but one in manuscript. The library is always opened when calls are made especially for books; but there are no stated times for opening it. No rules have been adopted respecting the use of the library. Members of the institute are entitled to visit the library, and there consult books as they wish; but they cannot take them away. Dr. James H. Causten, jr., librarian.

Jefferson Apprentices' Library—2,000 vols.

Library of the Observatory—500 vols.—The observatory (depot of charts and instruments) was established in 1842, under the Navy Department. Its library is composed mostly of mathematical works.

VIRGINIA.

BERRYVILLE.

The Academy Library—1,000 vols.—The president and trustees of this institution, in their report to the president of the literary fund, in 1835, state: "About 25 years since a lot of ground, containing about two acres, was procured in the town of Berryville, and a building erected thereon by private contribution, at an expense of about $3,000, which has since been constantly occupied as an English and classical academy. A few years since further subscriptions were entered into for the gradual purchase of a library of about 1,000 volumes, to be attached to the academy; which library is also in successful operation, and promises to be extensively useful, both to the students of the academy and to the residents in its immediate neighborhood."

BETHANY.

College Libraries—2,280 vols.—The library of Bethany College was founded in 1840, and contains 1,224 volumes, 12 maps and charts, and 21 engravings. One-half of the matriculation fees received from students is devoted to the library. The fund consequently fluctuates with the number of new students each successive session. The library is opened one hour each week. All persons connected with the institution are entitled to the use of the library. Books are not lent to other persons. There are two literary societies connected with the college. The Neotrophian Society, founded in November, 1841, has a library of 562 volumes. The American Literary Institute, founded in December, 1841, has a library of 494 volumes. J. D. Pickett, librarian.

BOYDTOWN, MECKLENBURG COUNTY.

Library of Randolph Macon College, near Boydtown—6,000 *vols.*—This institution was incorporated in 1832. Its library and mineralogical cabinet are valued, in the report to the president of the literary fund, in 1835, at $2,500. The number of volumes in its libraries is stated in the American Almanac, for 1850, at 6,000.

BRUNSWICK COUNTY.

Ebenezer Academy, incorporated in 1795, reports to the president of the literary fund, in 1835, "a small library."

CAROLINE COUNTY.

Rappahannock Academy.—Incorporated 1809-'10. The trustees in their report to the president of the literary fund, in 1835, say: "Connected with the institution is a library, selected, for the most part, by the late Colonel John Taylor, who may be regarded as the father of the institution, and purchased with funds obtained by the sale of the organ belonging to Mount Church. The library contains works on law, medicine, theology, history, biography, science, geography, political economy, &c., &c. It is, however, very inadequate to the wants of the academy; but such additions are made to it, from time to time, as its feeble means will allow."

CHARLOTTESVILLE.

Library of the University of Virginia—18,378 *vols.*—The library was founded in 1825, and contains 18,378 volumes, 21 maps and charts, and 2,000 engravings. The yearly average increase for the last ten years has been 413 volumes. The yearly average expenditure, prior to 1848, $500; for 1848, $1,000. The regular annual appropriation, out of the revenues of the university, is $500. The Madison legacy of $1,500 yields $90 per annum, for the increase of the collection. The library occupies the third story and dome of the rotundo—a circular brick building, 75 feet in diameter, erected in 1825, expressly for a library, for $70,000. The two lower stories are used for lecture-rooms, laboratory, museum, &c. A catalogue was printed in 1828 containing 116 pages 8vo. The library is open daily for an hour and a half. The rector, visitors, professors, and students of the university, and no others, are entitled to the use of the library. To these persons books are lent out under certain prescribed limitations. About 3,000 are taken out annually. About 275 persons, in a year, consult the library without taking away books. William Westenbaker, librarian.

"This library was originally selected and arranged by Mr. Jefferson. It has since been augmented by several valuable donations, among which are the legacy of Mr. Madison, amounting to 587 volumes; that of the late Christian Bohn, esq., a generous and enlightened citizen of Richmond, amounting to 3,380 volumes; and a donation of 234 works by an unknown and benevolent lady, through the Rev. Dr. Alexander, of Princeton. It contains an unusually large proportion of standard literary and scientific works in the principal European languages, together with a rich and extensive collection of engravings." [Annual catalogue, 1848-'9.]

EMORY, WASHINGTON COUNTY.

Henry and Emory College Libraries—8,001 *vols.*—The college library was founded in 1839, and contains 2,591 volumes, 51 maps and charts, and 63 coins. The yearly average increase, for the last ten years, has been 250 volumes. The average annual expenditure about $75, raised by a tax of $1 a year on each person using the library. A catalogue (28 pages 12mo.) was printed in 1846. The library is open one hour and a half each week. Any person paying the fee, and conforming to the rules, may borrow the books. E. Longley, librarian.

There are two societies of students possessing libraries: the Hermesian Society, 2,693 volumes; and the Calliopean Society, 2,717 volumes.

FAIRFAX COUNTY.

The Episcopal Theological Seminary of Virginia—4,995 *vols.*—The library, founded ——, contains 4,995 volumes, besides a considerable number of unbound periodicals and pamphlets. There is no permanent fund for the library. About $50 a year are appropriated by the trustees for the purchase of books. The library room is about 30 feet by 15. The library is opened twice a week. Those connected with the institution, and a few gentlemen in the neighborhood, are entitled to the use of the books. About 650 books are lent out in a year. There is a small library (200 volumes) belonging to the Rhetorical Society. Professor Packard, D. D., librarian.

LEXINGTON.

Washington College Libraries—4,997 *vols.*—The college library was founded in the spring of 1776. On October 13, 1774, a resolution was passed by the Hanover presbytery, appointing a committee to raise subscriptions for this purpose. In 1837 the library, though more than 60 years old, scarcely contained 700 volumes, and those were in a very shattered condition. It had no fund or other means of increase. A small fee has, for several years, been imposed upon every matriculate, which is devoted to the library, and yields from $125 to $150 per annum. Since 1837, about 230 volumes of public documents have been received from Congress, and about 420 volumes, "of a solid and substantial character," have been added by purchase. The library now contains 1,397 volumes. The college laws provide only for its use by students and professors, who can have access any day for consultation, and can take out books on the regular days twice a week. Other persons would doubtless be allowed the use of the books on applying for permission.

There are, besides, two literary societies connected with the college, possessing libraries of 1,800 volumes each. Rev. P. Calhoun, librarian.

Virginia Military Institute.—The library, founded in 1841, contains 2,500 volumes. The average annual increase has been 250 volumes. For the last five years, the State legislature has appropriated $500 per annum for the library. This is the only permanent resource. A room, 20 by 20 feet, in the public building, is appropriated to the use of the library. The library is open half an hour each week. The use of it to officers and cadets is gratuitous. About 1,500 volumes a year are lent out. Any person of respectability can always procure a book on application. Col. Francis H. Smith, librarian.

MADISON COURT-HOUSE.

Library Association—353 vols.—Founded January 1, 1812. The library contains 353 volumes, 2 manuscripts, 25 maps, 6 charts. It is opened once a week, and kept open two hours. A person may become a member by paying $1 per annum. T. J. Humphreys, librarian.

NORTHUMBERLAND COUNTY.

Academy Library—150 vols.—Founded in 1819. The trustees in their report to the president of the literary fund, in 1835, state: "The trustees have commenced a library, and have procured about 150 volumes of books, a set of globes and surveying instruments, and some maps; and for the want of funds, are unable to proceed further in this way."

PARKERSBURG.

Literary Association—360 vols.—Incorporated January 11, 1844. The library was commenced in the autumn of that year, and contains 360 volumes. About $40 a year are expended for books. The library is open every week-day during business hours. Persons entitled to the use of the books are: 1. Members of the association, who pay three dollars per annum; 2. Subscribers, who pay $2 per annum; 3. Apprentices, wards, and children of members or subscribers (they being responsible,) at $1 per annum. The average annual issue of books is about 225. Non subscribers may obtain the use of books by depositing their value. S. C. Shaw, librarian.

PRINCE EDWARD COUNTY.

Union Theological Seminary—4,306 vols—This institution is under the direction of the Presbyterians. It was founded in 1812. The library was founded in 1828, and contains 4,306 volumes and some manuscripts. The increase is slow; less than 100 volumes a year. Efforts are in progress to raise a fund for enlarging the library. The books are kept at present in the gallery of the seminary chapel. There is a catalogue, printed in 1833, of 107 pages 8vo. The library is open on Tuesdays and Fridays, one hour. All persons connected with the seminary and the faculty of Hampden Sidney College are entitled to the use of the books. The collection is a very valuable one, and is often consulted; but books are not lent out to others besides those mentioned, except on the personal responsibility of the librarian. The Society of Inquiry on Missions has 200 bound volumes and a multitude of papers and pamphlets. Rev. Samuel S. Graham, librarian.

Hampden Sidney College Libraries—8,000 vols.—This college was chartered in 1783. In 1835, the president and trustees, in their report to the president of the literary fund, say: "The college has a few books, scarcely deserving the name of a library. The two societies have each a respectable library." "By the census of 1840, this institution had 65 students, and 8,000 volumes in its library." [Howe's Hist. Coll.] This number probably includes the books in the society libraries.

PRUNTYTOWN, TAYLOR COUNTY.

Rector College Library—2,000 *vols.*—This college was chartered by the legislature in 1838. It was opened for the reception of students in 1839. The library was founded in 1840. It is a "valuable collection of more than 2,000 volumes, containing the Latin and Greek classics, a choice selection of works of modern authors, English, French, German, Spanish, &c. In the departments of theology, anatomy, mathematics, history, and moral science and law, are many standard authors." The whole library was collected in contributions from a great number of clergymen, officers of colleges and seminaries, and individuals in the New England States, but mostly in Massachusetts. The room occupied by the library is 25½ feet square, in the third story of the brick building erected for the college in 1838–'39. The library is open one hour a week. All the officers and students are entitled to the use of the library; the latter pay fifty cents a year for the privilege. Books are also lent to persons living in the town and vicinity. Besides the college library, the principal has a private library of 1,000 volumes, acessible to all the students. Charles Wheeler, principal.

RICHMOND.

State Library of Virginia—14,000 *vols.*—Founded in 1828, and contains about 14,000 volumes. There is a permanent fund derived from sales of books and maps published by the State, devoted to the increase of the library. It will yield about $2,000 per annum. The library occupies two rooms in the capitol; the larger 35 feet square, with a gallery containing an upper range of shelves; the smaller room is about 30 feet by 15. Several catalogues have been printed. The last is "A Catalogue of the Library of the State of Virginia, arranged alphabetically, under different heads, with the number and size of the volumes of each work specified; to which are prefixed the rules and regulations provided for its government"—157 pages 8vo.: Richmond, 1849; it is a handsomely printed catalogue, in which the books are arranged under twelve divisions. The departments best supplied are those of law, politics, and history. The general collection is very good. About 200 volumes have been received through M. Vattemare's system of exchanges. The library is open daily, Sundays and holidays excepted, from 9 a. m. to 3 p. m. Officers of government, judges of the courts, and members of the legislature are entitled to the use of the library. The customary courtesies are extended to visitors and to persons engaged in literary or scientific research. A note payable to the governor for double the value of the book, or set to which it belongs, must be given by any person taking a book from the library, conditioned upon its prompt and safe return. The note is to contain a further forfeiture for every day's detention of the book beyond the specified time. W. H. Richardson, librarian *ex officio.*

The Virginia Historical and Philosophical Society—1,200 *vols.*—This society was formed 29th December, 1831. The General Assembly, by an act of the 10th March, 1834, incorporated the society, and by resolution of the 6th February, 1835, directed to be presented to it a copy of the large map of Virginia, and such books and papers belonging to the library fund as the joint committee on the library may designate. A leading object of the society was to collect and preserve books and papers, both in print and manuscript, relating to the history of America, and especially of Virginia; to make its library a repository of everything of the kind, as far as practicable. [See preface to C. Robinson's "Voyages to North America, 1520 to 1573," 8vo.: Richmond, 1848. Prepared for the society.]

The library of the society now contains about 200 volumes, and about 50 manuscripts, relating chiefly to the history of Virginia, and a few medals, coins, and relics. But few purchases have been made. The library is kept in a large room in the law building, in which the meetings of the society are also held. It is open for consultation daily at all hours. Members of the society can introduce others. No books are allowed to be taken from the room. Perhaps 100 different persons consult the collection in a year. William Maxwell, corresponding secretary and librarian.

The private library of Mr. Maxwell, lent to the society and deposited in their rooms, contains about 1,000 volumes.

Richmond College Library—1,200 *vols.*—This library, founded in 1843, contains 1,200 volumes, a few maps, and about 40 diagrams for illustrating natural philosophy. The library occupies a room (12 by 18 feet) in the college building. It is opened once a week for half an hour, and frequently at other times, by request. Students who have the gospel ministry in view, pay nothing; other students pay $1 per annum for the use of the books. The Mu-Sigma-Rho Society has 60 volumes of books and a reading-room, with 6 periodicals, accessible by paying 6¼ cents per month. Robert Ryland, president.

The Library Association—1,600 *vols.*—This association published in 1841 a catalogue of its library, in 22 pp. 8vo.

ROMNEY.

Library of the Literary Society—1,000 *vols.*—The "Literary Society of Romney" was founded on the 4th of February, 1819, and incorporated by an act of the General Assembly of Virginia, passed January 3, 1823. A leading object of its institution was the purchase of a library of valuable standard authors, by the annual subscription of its members—an object which has been since steadily pursued, its present library of 1,000 vols. having been acquired solely by this means. By the liberality of the legislature (acts of the 6th of January, 1832, and of 15th of February, 1844,) the society, having then become possessed of considerable means, procured an act to be passed on the 12th of December, 1846, conferring upon it authority "to establish at or near the town of Romney a seminary of learning, for the instruction of youth in the various branches of science and literature." Immediately after the passage of this last act the "Romney Classical Institute" was founded under the auspices of the society, and is in a very prosperous condition. After 1853 the society will have received an endowment of $20,000; and will possess a permanent fund of

$12,000, yielding $720 per annum; one-half of which is devoted to the support of the Romney Classical Institute, and the remainder to the purposes of the Literary Society—the purchase of books, philosophical apparatus, &c. In 1845 a handsome brick building (two stories high, main building 54 feet by 40, with a wing forming a convenient residence for the principal of the institute) was built by the Literary Society, for its own use, and for an academy. The building and grounds cost about $8,000. The upper story of the main building is devoted to the use of the society, and is divided into two rooms—a hall for meetings, and a library. The meetings of the society are held in public, semi-monthly, for the discussion of questions literary, moral, &c.; and lectures on various subjects are occasionally delivered before it, by its own members or others, on the invitation of the society. By resolutions of the society, the use of its library is extended to ministers of the gospel of all denominations *gratis*, and to citizens generally on the same terms as those on which it is enjoyed by its own members. A "catalogue of the members and library" was printed at Romney, June 1, 1849: 16 pages 16mo. There are at present twenty regular members, who pay $3 each per annum to the library fund; and eight library members, admitted under certain regulations of the society, and paying the same fees. Persons having the use of the library are furnished with keys, and may enter at any time. Clergymen of the village, or vicinity, and the principal of the institute, are the only persons to whom the privileges of the library have been gratuitously extended. The librarian is A. P. White, of Romney. The principal of the institute is E. J. Meany.

WILLIAMSBURG.

William and Mary College Library—5,000 vols.—This college, next to Harvard the oldest in the country, was founded in 1692. It is not known with certainty when the library was commenced. It now numbers about 5,000 volumes. It is supported by a matriculation fee, or tax, of $5 a year from each student, amounting to about $400 a year. The library is opened one hour a week. There is no printed catalogue. Professor M. J. Smead, librarian.

NORTH CAROLINA.

CHAPEL HILL.

Libraries of the University of North Carolina—11,847 vols.—The University of North Carolina was incorporated December 11, 1789. The business of education was commenced early in the year 1795. At that time the library was begun. (See History of the University of North Carolina, American Quarterly Register, November, 1842.) It now contains 313 folios, 357 quartos, 2,536 octavos, and 265 duodecimos; in all, 3,501 volumes, besides a collection of manuscripts, principally relating to the history of North Carolina. The shelves of the room occupied as a library have been for some time more than full; and for this, among other reasons, little effort has been made to increase the library. A separate building is in contemplation, and will probably be erected during the ensuing year; and, when this is completed, it is expected that systematic arrangements will be made for the increase of the library. The library is open five times a week, an hour at a time. The faculty and the students use the library without fees. Ashbel G. Brown, A. M., librarian.

There are two literary societies connected with the college which have valuable libraries. The *Dialectic Society* has 26 folios, 93 quartos, 2,478 octavos, and 1,938 duodecimos; in all, 4,535 volumes. A catalogue was printed in 1821, (21 pp. 12mo.,) containing 1,673 volumes; another in 1835, (26 pp. 8vo.,) containing 3,060 volumes. The *Philanthropic Society* has 26 folios, 167 quartos, 3,314 octavos, 804 duodecimos, *et inf.;* in all, 4,311 volumes. A catalogue was published in 1822, (18 pp. 8vo.,) containing 1,473 volumes. These libraries are in buildings apparently connected with the wings of the other college buildings; separated, however, by a wall and copings of some four feet high. They were erected in 1847, of brick, at an expense of $10,000. The rooms are fitted up with alcoves 8 by 8 feet on each side. The central aisle is 20 feet wide; the length of the room 37 feet. All residents on the Hill who seem to be proper persons to have books, are allowed to use them without charge. The libraries are opened twice a week for an hour. The books in both are well selected, and in fine condition: they are much used.

MECKLENBURG COUNTY.

Davidson College Libraries—1,200 *vols.*

RALEIGH.

State Library--3,000 *vols.*

SALEM.

The Fayette Academy possesses a library, founded in 1804, containing about 1,500 volumes. The library is for the use of the teachers and pupils of the academy, which is an unincorporated institution of the Moravian Church. E. A. de Schweinitz, principal.

VALLE CRUCIS, WATAUGA COUNTY.

Mission School Library—1,500 *vols.*

WAKE FOREST.

Wake Forest College Libraries—4,700 *vols.*

SOUTH CAROLINA.

CHARLESTON.

The Library Society—20,000 *vols.*—The library was founded in 1748. On the 15th of January, 1778, it was nearly destroyed by fire; only 185 volumes of 5,000 or 6,000 being saved. It now contains 20,000 volumes. Its average annual increase for the last ten years has been 180 volumes, besides pamphlets. Average annual expenditure for the same period, about

$1,000. The income of the institution is derived from an annual assessment upon the members of $10 each; from rents of rooms and buildings belonging to the society, and from admission fees of new members, $25 each. It of course varies with the rise or fall of rent, and the number of new members admitted. It is at present about $2,500. A brick building, erected and long occupied by the Bank of South Carolina, was purchased about ten years ago by the society, and the upper story, consisting of one room 40 feet by 35, and two others, each 20 feet square, was fitted up at an expense of $2,000 for the library. The rooms on the first story are rented as offices. A three-story brick building belonging to the estate is rented as a dwelling-house.

"A catalogue of the books belonging to the Charleston Library Society, published by order of the society," containing 375 pages 8vo., was printed at Charleston in 1826. This is a classed catalogue, with an alphabetical index of authors and the titles of anonymous works. The preface contains a minute history of the society, with some excellent remarks on the arrangement and cataloguing of a library.

Volume two of the catalogue, containing books purchased since 1826, in 144 pp. 8vo., was printed at Charleston in 1845. This volume is classified, but the classification is different from that of the first volume. It has no index.

"A list of books obtained by the Charleston Library Society since the publication of the second volume of the catalogue of books, being the first supplement to the same, prepared by the librarian, and printed by order of the society," was published in 1847, at Charleston. It is alphabetical, and contains 23 pages 8vo. Several catalogues were printed before the destruction of the first library: in 1790, in 1802, in 1806, another in 1811, when the library contained 7,000 volumes. Some supplementary pages were printed in 1816 and 1818.

The library is open every day, Sundays and holidays excepted, from 10 o'clock a. m. to 3 o'clock p. m. About 5,000 volumes are lent out annually to members of the society or to their orders. The book committee may extend the privileges of the library occasionally to others. William Logan, secretary and librarian.

The following interesting sketch of the history of this important institution is taken from the preface to the catalogue of 1826:

"The Charleston Library Society owes its origin to seventeen young gentlemen, who, in the year 1748, associated for the purpose of raising a small fund to 'collect such new pamphlets' and magazines as should occasionally be published in Great Britain. They advanced and remitted to London ten pounds sterling as a fund to purchase such pamphlets as had appeared during the current year, acting at first under a mere verbal agreement and without a name. Before the close of the year their views became more extensive; and on the 28th December, rules for the organization of the society were ratified and signed, when they assumed the name of a *Library Society*, and made arrangements for the acquisition of books as well as of pamphlets.

"Officers were first elected on the 1st of April, 1749, and a few members were added during the spring and summer of that year. But as soon as the benefits of such an association were distinctly understood, the society became popular, and before the close of the year 1750 numbered more than 160 members.

"Efforts were made at an early period to obtain an act of incorporation. In the spring of 1751, through the influence of some of its members, a bill for incorporating the society was passed through both houses of Assembly, but was defeated by the governor, who refused his assent and signature. In the spring of 1752 another bill was passed through the legislature, which shared the same fate; and in 1753 the agent of the colony in London was requested to make every exertion in his power to obtain from the Privy Council in Great Britain a charter for the society, or instructions to the governor to ratify the act which both houses of the Colonial Assembly had passed. Upon an application to the Board of Trade by the agent, and some gentlemen who interested themselves in behalf of the society, they were informed that the measure was not considered as contrary to his Majesty's instructions, but that it was unprecedented to ratify in England a bill to which the governor of a province had refused his assent.

"It is difficult now to ascertain the causes which created these obstructions to the incorporation of a literary society. But the effect was injurious, and had nearly produced a dissolution of the association. The members finally resolved to place their funds at interest, and make no further purchases until a charter could be obtained. A third bill, however, was passed in 1754, to which Governor Glen finally gave his assent, and on the 24th June, 1755, it was confirmed by the Crown.

"From this time the progress of the society was rapid and satisfactory. The members continued to invest a portion of their income in bonds, and soon began to embrace in their views the establishment of an institution for education in connexion with their library.

"Such was the increase of their funds, that in January, 1775, the amount in bonds was £18,000, and between two and three thousand pounds were added to this sum between this period and the 1st of January, 1778.

"The library of the society, at the same time, was receiving regular additions from annual purchases and the donations of individuals, which were then frequent. Great attention appears, from the minutes of the society, to have been paid at this period to classical literature, and many discussions took place as to the portion of the funds which should be annually applied to this department of literature. The collection of classical authors and of commentators on the classics was not only respectable from its number, but valuable for the selection; for some excellent scholars then superintended this portion of its labors.

"It was in all probability this steady adherence of the society to the future establishment of an academy or college, (for the professors indicated in the report of the committee were adapted to a collegiate course of studies,) and the complexion of the library, that induced Mr. John M'Kenzie, a lawyer of eminence in Charleston, who died in the summer of 1771, to bequeath a valuable library to the society for the use of a college when erected in this province. These books were received, distinctly marked, and always kept apart from the books of the society.

"The commencement of our revolutionary struggle suspended all schemes of improvement. It soon became difficult for the society to collect its funds—it became more difficult to invest them; a large sum was placed in the treasury of the State, and the certificates of this debt were for a long time unproductive memorandums.

"But a heavier calamity awaited the society. The fire of the 15th

January, 1778, which destroyed nearly one half of Charleston, broke out a little after midnight in the immediate vicinity of the library. From the hour, the violence of a north wind which unfortunately blew, and the combustible materials with which our houses were usually built, the neighborhood was enveloped in flames before any effectual assistance could be rendered. The library, which then contained, according to the statement of Dr. Ramsay, who was a member at the time, between five and six thousand volumes, almost totally perished. A melancholy record on the journals states that only 185 volumes were saved, and many of these were volumes of mutilated sets.

"M'Kenzie's library, from some circumstance, probably accidental, fared better than that of the society: about two-thirds of the books were saved, though many of the sets were broken.

"This loss could not at that time be repaired. The war closed our communication with England, and the British maritime force intercepted our intercourse with Europe. A few books were procured in the city, but Charleston itself fell into the possession of the British in the spring of 1780.

"From a report made to the society in October, 1786, it appears that Fr. J. Fariau, who had been elected librarian in January, 1780, remained in Charleston during the time that this city was occupied by the British troops; that he took charge of the library, removing it with him from place to place as circumstances compelled him to change his habitation, and that it was owing to his assiduous care that the remnants of these libraries were saved from entire destruction.

"Immediately after the peace the society was reorganized, officers were appointed, and its meetings regularly resumed. But its funds were in a ruinous condition. Its members had been widely scattered by the accidents of war. Some had perished, many left the country, and those that remained could render but little effectual aid to its treasury. The country had been rendered desolate. The fortunes of individuals were prostrated, and where the bonds remaining to the society were eventually good, it was difficult to collect either the principal or the interest. For several years, although some few purchases of books were made, the society seemed to exist rather as a social club than as a literary association.

"If a catalogue entered on the books on the 3d November, 1790, is faithful—and there seems no reason to doubt its correctness—the library of the society then contained only 342 volumes, and M'Kenzie's books were reduced to 403 volumes. The librarian's minutes corroborate this statement, for they show that, in 1790 and '91, it was uncommon for more than three persons to take out books in the course of a month, and in some months none were borrowed.

"At length, in 1790, some debts due the society were put in a train for payment, and the indents which had been received for the money deposited at the commencement of the war in the treasury of the State, amounting to about $11,000, which, though frequently urged, it had wisely declined to sell, were funded and rendered valuable. It was then ordered that this stock should be sold; that $6,400 should be subscribed to the Bank of the United States, and that the remainder, with whatever sum should be received from their bonds or notes, should be applied to the purchase of books. The resolutions for the establishment of an academy were at this time finally repealed. The books which were imported in consequence of these orders, and which, from many circumstances, were delayed until the close of the year 1792, may be considered as the foundation of our present collection. From this time the increase of the library has been regular though moderate, and the early misfortunes of the society will account for its deficiency in ancient literature, and even in the political writings which preceded our revolutionary contest. In 1808, the books in the library amounted to 4,500 volumes; by the catalogue of 1811, to 7,000; and the number now probably exceeds 12,000.

"If this library should be found small, it must be remembered that it has been formed within a few years, from the very moderate contribution of its members. It has no patron to boast of—no act of public munificence to record. If we except a few donations of single volumes or sets of books,* and one legacy from Benjamin Smith, in 1770, of about $600, (£1,000 currency,) we find no memorial of other assistance.

"Previous to 1765, the library was kept at the houses of the respective librarians.

"Gabriel Manigault, esq., who had been president or vice president of the society for many years, then presented the society with a lease for twenty-one years of a convenient building, in or near Kinloch court, and prepared it for the library at his own expense; and the library was removed there in the beginning of 1765, and continued until the fire of 1778. Mr. Carwithen died in the summer of 1770, and Will. Hort was appointed librarian; he resigned in a few months, and Thomas Powell was elected on the 4th February, 1771; after holding the office fourteen months he resigned, and Samuel Price succeeded in April, 1772; he continued in office until the end of 1778, and Fr. J. Fariau was elected in 1779, and again in 1780, and continued librarian until the summer of 1783. After the fire of 1778, temporary accommodations were procured for the library. In January, 1780, Will. H. Gibbes, esq., offered a part of his office; the remnants of the library, however, appear to have been cased up after this time, for, in April, 1783, a committee was appointed 'to inquire for a proper room, that the books may be opened.' Mr. Dan. Cannon loaned the society a room in Queen street for a short time; but when Mr. John M'Call was elected librarian on the 1st July, 1783, he removed the books to his office. In April, 1784, the intendant and wardens of the city offered the society a room in the Exchange, whither the books were removed. In October, 1787, the council required their room, and the library was placed at the corner of Broad street and the bay. In January, 1788, it was removed to the corner of Tradd street and the bay. In January, 1791, it was again removed to the corner of Broad and Church streets, and in November, 1792, finally placed in the room it now occupies in the upper story of the court-house.

"When the court-house was rebuilt by subscription, after having been burnt in 1788, the members of the Library Society subscribed very liberally, and promoted the subscription with their influence, with an understanding that their books would be permitted to occupy some portion of the building—and in this arrangement there has been hitherto a liberal acquiescence."

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*"It deserves to be noticed that the individual to whom this society has been most frequently and perhaps most extensively indebted, is an inhabitant of Paris. Passing some time in Carolina with his father, many years ago, they received from some of its inhabitants those hospitable attentions which the citizens of this country take so much pleasure in paying to strangers, and the courtesy has never been forgotten. Scarcely a year for some time past has elapsed without ur receiving from him some volume or work as a testimonial of his remembrance. I allude to adre Michaux, the younger, the author of the splendid work on the Forest Trees of North America."

Apprentices' Library—8,500 *vols.*—The society was incorporated 18th December, 1824, and rechartered in December, 1840. The library was first opened June 1, 1824. It now contains about 8,500 volumes; about 50 maps and charts, and six portraits of gentlemen distinguished in the Revolution; also a philosophical apparatus, worth about 500 dollars, and a pair of globes of three feet diameter, and new. The average annual increase is about 500 volumes. The average annual expenditure for books is about $150. A brick building with a tin roof was erected for the institution in 1840, at a cost of $14,500. It is 78 feet long, 34 feet wide, and two stories high. The upper story is occupied solely as a lecture-room. The lower story contains a library 37 feet by 29, and two reading-rooms, each 23 feet by 12. A catalogue (336 pages small 8vo.) was printed in 1840.

The library is open every day (except Sundays) from 4 o'clock p. m. till 9 in winter, and 10 in summer. Books are lent to members of the society, their families, and apprentices, and to other young persons recommended by members as beneficiaries. Each member pays one dollar for admission, and two dollars and fifty cents per annum in advance. About 800 or 900 books, and sets of books, are taken out annually; or, on a daily average, about 22 books to about 18 applicants. All strangers are welcomed to the use of the books at the library. Besides these, eight or ten residents resort to it daily as a reading room. "The old books, and those not often consulted, unless bound with Russia leather, are apt to be injured by insects. They may be saved by taking them out every week or two and striking the backs together, also by clippings of Russia leather scattered about on the shelves." William Estell, secretary, treasurer, and librarian.

The Library of the College of Charleston—2,000 *vols.*—In the year 1785, three colleges—one at Charleston, another at Winnsborough, and a third at Cambridge—received a common charter from the legislature of South Carolina. In 1791 a separate charter was granted to the College of Charleston. This institution was reorganized on the 20th of December, 1837, at which time an act of the legislature was passed authorizing the transfer of all the college property to the city council of Charleston. The city council is bound to maintain the college.

The library was commenced about 40 years ago. In the year 1828, a considerable donation of valuable books was made by the citizens of Charleston. The library contains at present about 2,000 volumes. "A Catalogue of the books in the Library of the Charleston College," containing 36 pages 12mo., was printed at Charleston in 1849. William Peronneau Finley, president of Charleston College.

The Medical College of the State of South Carolina—2,450 *vols.*—The library of the Medical Society contains 2,450 volumes. About 120 dollars are yearly expended for books. The library occupies a room, say 22 by 18 feet, in the Medical College. A catalogue was printed in 1834, and another, containing 40 pages 8vo., in 1842. The library is open four times a week for two hours, and is freely accessible to members of the Medical Society, and all others to whom they may grant permits. About 350 volumes are annually lent out; and about 250 persons each year consult the library without taking away books. Dr. S. L. Lockwood, librarian.

COLUMBIA.

South Carolina College Libraries—18,400 *vols.*—In 1802, there was an act of the legislature to purchase books for the college library. The collection at present contains above 17,000 volumes, including an unusually large proportion of elegantly illustrated works. Its annual increase is about 500 volumes. There is an annual appropriation by the legislature of $2,000 for the library. A brick building was erected in 1838, for the use of the library, at a cost of $22,000. There are two rooms on the sides of the passage in the lower story. The library room is 100 feet by 40, and is modelled after the Congress Library. An architect was sent to Washington to copy the plan. A catalogue was printed in 1836, of 112 pp. 8vo., prepared by Edward W. Johnston. Another, 151 pp. 8vo., was published in 1849. It is intended merely for temporary use, whilst a more perfect one is in preparation.

The library is open every day in the week, except Sunday, from 9 o'clock till one.

Persons entitled to the use of the books are the trustees, faculty, and students; all who present $100 worth of books, and others who have a special permission from the trustees. Any gentleman can get a book by using the name of a trustee or professor. F. W. McMaster, librarian.

Students' societies—

Clasiosophic Society Library - - -	700 volumes.
Euphradian Society Library - - -	700 "

The college library is one of the best selected in the country. The learned aid of Professor Lieber has been bestowed upon it. The collection is far more valuable than many of twice its size. The legislature of South Carolina has abundant reason to be proud of its liberality, and satisfied with the manner in which it has been seconded by the officers of the college.

Theological Seminary of the Synod of South Carolina and Georgia—4,754 *vols.*—This institution was established by the Presbyterians in 1828, went into operation in 1831, was incorporated in 1832. The library was commenced in 1830, and contains 4,554 volumes. Most of the books have been presented by individuals; yet, for the whole time since the library was commenced, the average annual expenditure for books has been $243. The library is temporarily placed in a lofty room, 25 feet by 20, in one of the buildings of the seminary, and is open four or five times a week, one hour each time. There is no printed catalogue. The officers and students of the seminary, and, by courtesy, clergymen of the town, are allowed the use of the books. About 1,300 volumes a year are lent out. In answer to the question, "Have the books been injured at any time by insects?" the librarian writes: "Much injured by a small shiny moth, which eats off the pasted titles of cloth-bound books, and sometimes by a blackish worm of the caterpillar kind, the product of a brown miller or moth, which eats leather binding. It is also found that, in this climate, except in the driest situations, and occasionally even in these, leather-bound books suffer much from mould—English leather-bound books less than American, and French perhaps less than English. One gentleman amongst us has suffered so much from this cause, that he will only have books bound in cloth; and these, if the letters are stamped on the back, without being on a title which is pasted, are injured less by mould and insects than any other."

The "Society of Inquiry," composed of students of the seminary, possesses about 200 volumes. It maintains also a reading-room, in which the principal newspapers and reviews of this country are taken, as well as the reviews of Great Britain, and one or two German publications. This room is accessible at all hours. There is also under the control of this society a museum, containing articles illustrative of the natural history and superstitious usages of heathen nations. Rev. George Howe, D. D., librarian of the seminary.

FAIRFIELD DISTRICT.

Furman Theological Seminary Library—1,500 *vols.*—This is a Baptist institution, established in 1826.

GREENWOOD, ABBEVILLE DISTRICT.

Hodges Institute—500 *vols.*—The Sopronean Society of this institution possesses about 300 volumes. There is, besides, a reference library of 200 volumes. The institute was incorporated in 1848. It is the design of the trustees to make the institution one of the first order. Issachar Howard, librarian.

LEXINGTON COURT-HOUSE.

Theological Seminary of the Evangelical Lutheran Church—1,560 *vols.*—The library, founded in 1833, contains 1,560 volumes, besides many pamphlets. The library is kept at present in the house where the lectures are given, and occupies a room 25 feet long and 10 feet wide. It is hoped that better accommodations will soon be obtained. There is a written catalogue, somewhat in arrears. The library is open for taking out and returning books every Wednesday from 8 to 12 o'clock. The library is intended for the use of the students of the seminary and the ministers of the Lutheran church. Others may be admitted to its privileges on application to the professor of theology, who has the superintendence of the library—Professor Ernest W. Hazelius, D. D., Librarian.

GEORGIA.

ATHENS.

Franklin College Libraries—10,267 *vols.*—The present college library was commenced in 1831, the former one having been destroyed by fire in October, 1830. It contains 7,267 volumes, 59 maps and charts, a medal struck in commemoration of the victory at Saratoga, 3 gold, 94 silver, and 249 copper coins, ancient and modern. The yearly average increase for the last ten years has been about 132 volumes. The annual expenditure for books, during the same period, about $600. The income of the library is derived from appropriations by the trustees of the college. In 1835, a brick building was erected for the accommodation of the library and mineralogical cabinet, at a cost of $3,000. It is 50 feet long and 40 feet wide, measuring from the outside of the walls. It is two stories high, with two rooms on each floor. The books are arranged according to subjects. A catalogue was published about twelve years ago. Another was printed in 1847, entitled "Catalogue of Books in the Library of the University of Georgia, by Professor James Jackson, librarian; published by order of the board of trustees: Athens, 1847:" small 12mo., 69 pages. The titles are distributed under twenty-eight classes, corresponding with the arrangement of the books upon the shelves. The library is opened four times a week—Monday to Thursday, inclusive—and is kept open from half an hour to an hour each time. The trustees, faculty, resident and undergraduates are allowed the free use of the books. Under-graduates are required to return or renew them every two weeks. Literary gentlemen and ministers of the gospel in the place are, on the responsibility of the faculty, admitted to the privileges of the library. The trustees and faculty alone are allowed to take books out of the town. Professor James Jackson, librarian.

The Libraries of the Franklin Society and of the Phi Gamma Society contain 3,000 volumes.

AUGUSTA.

Library of the Medical College of Georgia—4,000 *vols.*—This library, founded in 1833, contains 4,000 volumes. The average yearly increase is about 150 volumes. The expenditure for books, $200. The library occupies a room in the college building 25 feet by 35, and is opened daily during the forenoon. The faculty are allowed the use of the books by having the work taken out charged to the borrower; the students, by depositing $10 as security for the return of each volume. L. A. Dugas, M. D., librarian.

The Young Men's Library—1,510 *vols.*—The Young Men's Library Association was founded 27th January, 1848. It expends about $200 a year in the purchase of books. The society rents two rooms, each 40 feet by 20, in a brick building—one for the library, and the other for a reading-room. The library is open daily (Sundays excepted) from 8 to 10 a. m., and from 3 to 10 p. m. Persons become life members by paying $50. Regular members pay $4 a year. Members are allowed to introduce strangers to the use of the library for two weeks. The library at present contains about 1,510 volumes. Thomas Courtney, librarian.

MACON.

Wesleyan Female College Library—350 *vols.*—The college was incorporated in November, 1837, and opened for students in January, 1839. The library was commenced with the college, and now (January, 1850) contains about 350 volumes, a few valuable ancient coins, a respectable cabinet of minerals, and a few antiquities, mostly the fruit of private donations. The library occupies a room in the college edifice, and is accessible at all hours of every day. The use of the books is free to the officers and pupils of the school.

MILLEDGEVILLE.

Oglethorpe University Libraries—4,000 *vols.*—The college library was founded with the college, in 1838. It contains about 2,000 volumes, mostly donations, and occupies a large and airy room in the college edifice. It is opened twice a week—one hour each time. The laws allow of the books being lent, within a mile of the college, at the discretion of the president. Persons connected with the college may use them without fee. The two literary societies (the Thalian and the Phi Delta) have well-selected libraries of 1,000 volumes each.

OXFORD.

Emory College—2,700 *vols.*—The college library, founded in 1839, contains 1,020 volumes, increasing by donations alone. It occupies a room 20 feet square in the college building. There is no printed catalogue. The library is opened four days each week, half an hour at a time. Professors and students are allowed to use the books without charge. About 250 volumes are taken out each year. There are two societies of students having libraries. The Few Society has 725 volumes; the Phi Gamma Society, 960 volumes. Rev. J. M. Bonnell, librarian.

PENNFIELD.

Mercer University—4,000 *vols.*—The library was commenced when the college was chartered in 1838, and now contains 3,000 volumes. The available funds of the college have hitherto been devoted mainly to the purchase of apparatus and the erection of buildings, whilst the library has remained nearly stationary. It is, however, expected soon to receive more attention. There are two other small but annually-increasing libraries connected with the college. S. P. Sanford, librarian. The Baptist Theological Seminary is connected with the university.

SAVANNAH.

Historical Society Library and Savannah Society Library—7,000 *vols.*—The Georgia Historical Society was founded in June, 1839, and incorporated the 19th of December of the same year. It has published several volumes of Collections. The legislature confided to the care of the society the invaluable documents obtained in England by the Rev. Charles W. Howard, at a large expense to the State. "These are comprised in 22 volumes folio. Fifteen are from the records of the Board of Trade, six from the State Paper office, and one from the King's Library; forming a body of historical information full of the most interesting statements, letters, and reports relating to the colonial period of Georgia."

The Savannah Society Library has been lately united with that of the Historical Society. They together contain about 7,000 volumes.—[See Account of the Georgia Historical Society, by W. B. Stevens, M. D. American Quarterly Register, May, 1840, p. 344.]

"This province [Georgia] was scarce thirty years settled before it had three fine libraries in the city of Savannah, the fourth at Ebenezer, and a fifth 96¾ miles from the sea, upon the stream of Savannah. In these libraries could be had books written in the Chaldaic, Hebrew, Arabic, Siriac, Coptic, Malabar, Greek, Latin, French, German, Dutch, and Spanish, besides the English, viz: in thirteen languages."—[De Brahm's Georgia, privately printed by G. W. Jones, of Georgia, in 1849, from an old MS. in Harvard University Library.]

ALABAMA.

LA GRANGE.

College Library—3,000 vols.

MARION.

Howard College.—The library, founded in 1842, contains 1,500 vols. It is opened once a week for half an hour. S. S. Sherman, president. This is a literary and theological institution, and the library is consequently designed to be literary and theological.

MOBILE.

The Franklin Society, founded 17th January, 1835. The library contains 1,454 volumes, with a few coins and maps. Of late years but few additions have been made to the library, the attention of the society having been mostly turned to maintaining a reading room. The Franklin Society and the societies of Free Masons have erected a brick building for their joint accommodation. The room of the Franklin Society is a parallelogram, 62 feet by 32. The library and reading-room are open daily for the use of members of the society and subscribers to the reading-room. The books are used in the room. P. Hamilton, president.

SPRING HILL.

College Library—4,000 vols.

TUSCUMBIA.

The Literary and Scientific Club, formed in 1849, meet weekly to discuss questions and submit essays, some of which have already been published. A fund is accumulating gradually for the purchase of books. The secretary is G. M. Wharton.

TUSCALOOSA.

The University of Alabama—7,123 vols.—The library was founded in 1831, and contains 4,500 volumes. The yearly average increase, for the last ten years, has been 159 volumes. There is a stated annual appropriation of $200 for the library. Within the last five years the trustees have made two extra appropriations of $500 each. The library is in the "Rotundo," which is occupied, besides, as a chapel, and for public exhibitions. The library room is a large circular apartment, 85 feet in diameter. The whole building cost $75,000. The foundation, to about four feet above the surface, is of sandstone; the residue of brick. The first printed catalogue—a pamphlet—was published in 1838. The last—a volume of 257 pages 8vo.—was printed in 1848.

The library is opened twice a week, and kept open about an hour each time. The trustees, faculty, resident graduates, students, and donors to the amount of $100 to the library, are entitled to the use of it, and may take out books. About 800 volumes are lent annually. Robert S. Gould, librarian. The two students' libraries contain 2,623 volumes.

The first catalogue of the library was prepared by Mr. Richard Furman. It was classified. The second was prepared by Mr. Wilson G. Richardson, M. A., now professor in the university. It is on the plan of the catalogue of Brown University Library. This elegant catalogue is highly creditable to the institution, and honorable to the industry, taste, and learning of the gentleman who prepared it. A few such publications will establish a high standard of excellence for the catalogues of even small libraries, and will demonstrate their value. "A catalogue," says Mr. Van der Weyer, "is like the eye of a library." Let the eye, therefore, be perfect, that the whole body may be full of light.

FLORIDA.

PENSACOLA.

The Naval Hospital.—The library of the Naval Hospital was founded January 16, 1847, and contains at present 1,337 volumes, besides pamphlets. The library has been raised by voluntary subscriptions of the inmates of the hospital, and of benevolent individuals, officers of the navy, &c. Mr. Secretary Mason directed $150 to be given from the Naval Hospital fund. A considerable number of donations have been received. The library room is in the hospital, and measures 27 feet by 24, and 17 feet high. It is open from morning to evening every day. Any inmate of the hospital may take out one book at a time. The library is the property of the hospital, and is under the direction of the surgeon in charge. The present incumbent is Isaac Hulse, M. D., U. S. Navy. The steward of the hospital, Mr. G. L. Brown, is acting librarian.

ST. AUGUSTINE.

Judicial Library—2,000 vols.

TALLAHASSEE.

State Library.—The State Library was founded in 1845, and contains 2,000 volumes. The use of the library in the room is free to all persons. The library is under the care of the Secretary of State, Charles W. Downing.

MISSISSIPPI.

JACKSON.

State Library—5,000 vols.—Founded by act of legislature, passed February 15, 1838, appropriating $3,000 for the purchase of suitable books. Previous to 1842 there was an annual appropriation of $1,000 for the purchase of books; since then the appropriation has been $500—one fifth of which is for law books. The library is on the third floor of the State capitol. "A Catalogue of the Library of the State of Mississippi, arranged alphabetically, under different heads, with the number, size, and cost of the volumes of each work specified, to which are prefixed the rules and regulations provided for its government," 27 pages 8vo., was printed at Jackson in 1839; the same, with additions, 34 pages 8vo., 1841; same, 1845, 43 pages 8vo.; same, 61 pages 8vo., 1847; same, 51 pages 8vo., 1849. The price of each book is given in every catalogue, and forms a novel but interesting feature. The library is opened every day during the session of the legislature, Sundays excepted, from 9 a. m. to 3 p. m. All persons are allowed to use the library when open, but no one is allowed to take out books but the trustees, State treasurer, adjutant general, judges of the United States circuit court, and members of the legislature while in session. Persons who have filled the office of governor of the State, chancellor, judge of the high court of errors and appeals, United States senator from the State, whilst they may be in the city of Jackson, are allowed to borrow books. For every book issued, a receipt or note of twice its value, or twice the value of the set to which it may belong, must be given, conditioned on its safe return, and the payment of all forfeitures and penalties for detention beyond the time limited by the laws. John W. Patton, librarian.

CLAIBORNE COUNTY.

Oakland College—6,000 vols.—The college library, founded in 1831, contains 3,589 volumes, 200 maps and charts, 800 engravings, and 200 medals and coins. In 1841, $3,000 were appropriated for books, but the library has been increased principally by donations. An apartment in the college chapel, (a brick building,) 25 feet by 22, and 14 feet high, is used for the library. The books are arranged according to donors. The library is opened once a week for an hour, and frequently at other times. Books are lent to all who apply for them: few, however, are taken out except by the officers and students of the college. Professor John Chamberlain, librarian.

The students' libraries contain 2,411 volumes.

OXFORD, LAFAYETTE COUNTY.

The University of Mississippi, near Oxford, went into operation in November, 1848. Its library contains about 1,600 volumes. The State has made an appropriation of $3,000 a year for books and apparatus. The college has an income of $16,000 per year: seven professors and eighty students.

WASHINGTON.

College Library—1,000 vols.

LOUISIANA.

BATON ROUGE.

State Library—7,000 vols.—The State Library was founded the 12th of March, 1838, and contains about 7,000 volumes, some MSS., maps, engravings, &c. The library has lately been removed to Baton Rogue and placed in a room in the capitol. A correct description and inventory of it will soon be prepared. As yet, there is no printed catalogue. The average annual increase is about 300 volumes. An annual appropriation of $1,000 is made by the State legislature for the increase of the collection. The library is open daily from 10 a. m. to 3 p. m. Admittance is free to all persons, but no book is to be taken away except by members of the legislature during their sessions. Paul Caire, librarian.

College Libraries—1,000 *volumes.*

BRINGIERS.

Jefferson College Libraries—6,000 *vols.*

JACKSON.

Louisiana College Libraries—2,000 *vols.*

NEW ORLEANS.

Public School Library—10,000 *vols.*—"The Public School Library and Lyceum Society of Municipality No. 2" was founded December 3, 1844. The library contains [1850] 10,000 well-selected volumes. It has also two books of paintings, and five books of sketches. It is supported by subscriptions, donations, and voluntary contributions of the pupils of the public schools, and is fast increasing. An elegant room, 75 feet by 35, and 20 feet high, has been recently provided for the permanent accommodation of the library, in the new 2d Municipal Hall. The exact cost of this room is not perhaps known; the cost of the entire building is estimated at $300,000. There have been two printed catalogues: the first, numbering 29 pages, was published in 1846; the second, 155 pages, in 1848. The library is open daily (Sundays excepted) from 2 to 8 o'clock p. m. Subscribers pay $5 per annum. Pupils of the public schools may become life members by paying $9. The teachers of the public schools are entitled to the privileges of the library without charge. The librarian is Samuel H. McConnell.

TEXAS.

AUSTIN.

The State Library.—The collection of books usually styled the State Library was commenced in 1837, and has been derived from donations. It numbers at present 1,001 volumes. The average annual increase is about 80 volumes. The books are kept in the building of the State department, and are accessible to the public, without charge, during business hours, every day. About 300 are annually taken out, and perhaps 300 or 400 persons annually consult the collection without borrowing books. The library is in charge of the secretary of state, who is considered *ex officio* librarian.

HUNTSVILLE.

Austin College, incorporated in 1850, is in vigorous progress, and collecting a library.

INDEPENDENCE.

Baylor University Library—300 *vols.*

ARKANSAS.

LITTLE ROCK.

Lyceum Library—1,000 *vols.*

TENNESSEE.

COLUMBIA.

Jackson College Libraries—2,500 *vols.*—The college library was begun in 1834, and contains about 2,000 volumes. About 400 volumes have been added during the last ten years. There is a manuscript catalogue. The library is opened once a week for an hour. Students pay 50 cents per session for the use of the books. Rev. Joseph Sherman, LL. D., librarian.

Students' libraries, 500 vols.

The Female Institute Library—3,500 *vols.*—Established February, 1839—contains 3,500 volumes, and the richest collection of engravings in the State. About 350 volumes per year are added to the library. About $150 are annually expended for the purchase of books There is a manuscript catalogue. The library is opened one hour each day. Members of the institute pay $1 per annum for the use of the books. Books are not taken from the institute except by day pupils. F. G. Smith, rector.

GREENVILLE.

College Libraries—3,000 *vols.*

JACKSON.

West Tennessee College was incorporated in 1843, and reorganized in 1849. It has four teachers and ninety-two students. It has begun to collect a library.

KNOXVILLE.

East Tennessee University—4,500 *vols.*—The college library, founded in 1819, contains 2,300 volumes. It is supported by fees for the use of the books, with occasional appropriations from the funds of the university. It occupies a room 20 feet square and 14 feet high, in the main building of the university, which is of brick. The library is open regularly once a week, and, on application, at other times. Officers of the university are allowed to use the books without charge; students pay $1 a year for the privilege. About 150 books are lent out in a year; and about 240 persons consult the library without taking away books. There are two literary societies connected with the college, (the Chi Delta and the Philomathesian,) which have each about 1,100 volumes, in rooms belonging to the university, connected with the society halls. These libraries have been founded but a few years, are rapidly increasing and much used. Albert Miller Lea, librarian E. T. University.

LEBANON.

Cumberland University Library—4,000 *vols.*—The library, commenced in 1844, the date of the charter of the university, contains some 4,000 volumes. William Mariner, librarian.

MARYVILLE.

College Libraries—3,700 *vols.*—This institution was founded in 1821, and was called the "Southern and Western Theological Seminary." A charter was obtained from the legislature in 1842, and the name of the institution changed to "Maryville College." The library, commenced in 1821, contains 3,200 bound volumes, and about 500 pamphlets. The increase has been very slow, not more than 25 volumes per year. The library is in a room 20 feet by 12, in the second story of a brick building belonging to the college. It is opened whenever application is made for books. Students of the college, and persons in and near the town, pay $1 a year for the use of the books. Clergymen educated at the college, and residing within one hundred miles, are allowed the use of the books without charge. The "Beth-Hacma Society" of students has 125 vols. The "Beth-Hacma-ve Berith" Society has 375 vols. John S. Craig, librarian of the college.

MURFREESBOROUGH.

Union University Library.—500 *vols.*

NASHVILLE.

State Library—8,000 *vols.*—The State Library has no legal existence or distinct name, but is merely the depository, under the care of the secretary of state, of books and charts which have been accumulating ever since the foundation of the State. It contains now about 8,000 volumes, mostly reports, public documents, and books presented. There is no appropriation for its increase. A large and elegant room, 36 feet square and about the same in height, in the new capitol, will be assigned to the library. The library is now opened daily from morning to evening, (Sundays excepted.) It is accessible to all persons, and books are freely lent to all who apply for them. W. B. A. Ramsey, secretary of state.

Nashville University Libraries—9,456 *vols.*—"Davidson Academy" was incorporated by the General Assembly of North Carolina 29th December, 1785. Its name, property, and rights were merged in "Cumberland College," incorporated by the legislature of Tennessee, 11th September, 1806. The legal style and title of this college was changed to "*The University of Nashville*" by an act of the legislature, 27th November, 1826. The library was founded in 1824, and contains (1849) 3,144 volumes, and a few MSS. During the last four years the sum of $1,216 75 has been paid for books. There is a catalogue in manuscript, but none printed. Professor N. Cross is librarian.

There are two society libraries, namely: the Agatheridan, with 3,576 volumes, and the Erosophian, with 2,736 volumes; making with the college library a total of 9,456 volumes deposited in the college building, and which may be consulted or borrowed by any member of the university; also by others on certain easy conditions. The president, Philip Lindsley, D.D., and Professor Troost, have private libraries, containing 7,000 or 8,000 volumes. The three public libraries are said to contain "many rare books in various languages, and very few that are not useful."

Franklin College, (near Nashville,)—2,100 *vols.*—The college library, commenced in 1844, contains 1,200 volumes, and increases about 100 a year. The expenditure for books and collections in natural history is about $200 per annum. The library is opened twice a week for one hour. The members of the faculty have free use of the library, and the students pay $2 per annum. Perhaps 1,000 persons visit the library in a year. There are two societies of students, the Euphronian and the Apollonian, with libraries containing together about 900 volumes.

WASHINGTON COUNTY.

Washington College Library—1,000 *vols.*

KENTUCKY.

AUGUSTA.

College Libraries—2,500 *vols.*

BARDSTOWN.

St. Joseph's College—3,000 *vols.* The college library was founded in 1824, when the college was incorporated by the legislature of Kentucky. Before August, 1848, the library contained about 6,000 volumes. At that time the board of trustees divided the library between this and several other institutions which they directed, leaving to St. Joseph's College about 500 volumes of theological, historical, and literary works, with a set of congressional documents. A new board of trustees, at present, controls the affairs of the institution, and they are determined to form a permanent and valuable library. It already numbers about 2,000 volumes. It has also about 400 medals of the 15th, 16th, 17th, and 18th centuries, and about 200 modern coins. The expenditure for books from the general funds of the college is about $250 a year. The principal reliance for the increase of the collection is upon donations. The library occupies a room 24 feet by 15, and 13 feet high, in the college building. The books are arranged according to subjects—each subject having one or more panels. There is no printed catalogue. The library is opened every day twice, to allow the professors opportunity for consultation—three-quarters of an hour in the morning and one hour in the afternoon. Books are freely lent to persons connected with the college, and, by permission of the superintendent, to others residing in the immediate vicinity.

There are two societies of students possessing useful libraries; the

Eurodelphian (or English) Society has a collection of works in English literature, and the Eucerophradic (French) Society possesses a library of French books. Rev. John Roes, S. J., librarian.

COVINGTON.

Library of the Western Baptist Theological Institute—2,000 *vols.*—The library was founded in 1845, and contains about 2,000 volumes. One thousand dollars a year is hereafter to be appropriated from the general funds of the institution for the increase of the collection. The library is opened on Tuesday and Friday of each week from 8 to 9 o'clock a. m. All members of the institute and ministers of the gospel in the city are entitled to the use of the library. Rev. Prof. A. Drury, librarian.

DANVILLE.

Centre College—5,050 *vols.*—The college library, begun in 1824, contains 1,850 volumes. The endowment of the college is nearly completed to $100,000. After it reaches that point, systematic efforts will be made for raising a large library fund. There are two libraries belonging to societies of students—the Deinologian (1,600 volumes) and the Chamberlain (1,600 volumes.) John C. Young, president Centre College.

FRANKFORT.

State Library—9,000 *vols.*—Founded in 1834, and contains about 8,000 or 9,000 volumes, mostly law books and public documents. There are not more than 200 volumes of miscellaneous works. In 1840, the legislature appropriated $3,000 for law books for the courts and the legislature. The library is kept in a room, 50 feet by 20, in the State-house. A catalogue is in preparation and will soon be published. The library is opened daily during the sessions of the courts and legislature. Officers of the State government, members of the legislature, and lawyers attending the courts in Frankfort, are allowed the use of the books. The books are not lent out to others. R. D. Harlan, librarian.

GEORGETOWN.

Georgetown College Libraries—7,280 *vols.*—The library was founded in 1837, and contains 6,500 volumes, comprising many costly works in philology and theology, but chiefly scientific and historical books, a few manuscript journals of early settlers of Kentucky, and many maps and charts. It has also 64 medals and 676 coins, comprising those of Burmah, Siam, Hindostan, the East India Company, South America, Dutch East Indies, &c. The average annual increase is about 500 volumes. The late additions of 800 volumes have been obtained by the president as donations, as have also all the coins, medals, and other articles, as idols, statues, &c. There is a charge of $1 per annum on each student for keeping the books in repair. The library is in a room of the main building of the college, 45 feet by 32, with lofty ceiling. The coins, medals, pictures, &c., are kept in a room devoted to the purpose, on the same floor as the library. The books are arranged on the shelves according to subjects, under twenty divisions. A catalogue *raisonné* was printed in ——, containing 76 pages 12mo. The library is open twice a week, half an hour each time. All persons connected with the college are allowed the use of the books; undergraduates are taxed $1 each per annum for the privilege. By permission of the president, books may be taken out by citizens. No application has ever been refused. Prof. Danford Thomas, librarian.

Two voluntary societies of students are attached to the college—each having a convenient hall and a library. The two libraries contain 780 volumes.

The Female Collegiate Institute—organized 1838—"has a select library of 500 volumes."

HARRODSBURG.

Bacon College,—The college possesses about 1,800 volumes, accessible to all persons, but no regularly organized library.

LEXINGTON.

Transylvania University—14,000 *vols.* The college library, founded in 1798, contains about 12,000 volumes, in three library rooms in the three departments of the university, under the control of the faculties of arts, law, and medicine. Several catalogues have been published, but none of recent date. H. B. Bascom, president T. U.

The students' libraries contain 2,000 volumes.

LOUISVILLE.

The Louisville Library—3,500 *vols.*—was chartered as the "Mercantile Library Association." Two years ago it was reorganized and received the name of the Louisville Library. The library contains 3,500 volumes. The stockholders of the library are about to erect, on the court-house square, a handsome building of stone and brick, 60 feet by 30, to cost $5,000, for the joint accommodation of this library, that of the Kentucky Historical Society, and that of the Louisville Law School; which, united, will form about 6,000 volumes. The room for the Louisville Library will be 60 feet by 30, and 25 feet high, fitted up with alcoves and galleries. A catalogue was printed about 10 years ago, and reprinted in 1848. The library will be open every day and evening till 10 o'clock. Stockholders and subscribers alone are entitled to take out books. William Johnston, librarian.

Kentucky Historical Society—1,000 *vols.*—This society was organized March, 1838, and has a library of 1,500 volumes. [See Louisville Library.]

Louisville Law School has a library of about 1,000 volumes. [See Louisville Library.]

Medical Department of the University of Louisville—1,000 *vols.*—"The library is enlarged from year to year by the purchase, not only of new medical works, but of costly books pertaining to the allied sciences. Handsome additions have lately been made to it, and other purchases will be made in the course of the coming vacation."—[Annual catalogue, 1849–'50.]

MARION COUNTY.

St. Mary's College Library—5,000 vols.

PRINCETON, CALDWELL COUNTY.

Cumberland College (near Princeton)—1,210 vols.—The college library was founded in 1825–'6. It contains about 1,000 volumes. Exertions are now making for its enlargement. A new room, 30 feet by 18, has lately been fitted up for its accommodation. There are in connexion with the college two literary societies: the "Erodelphian," organized in 1842, reorganized in 1847. It has a large hall, 30 feet by 18, well carpeted and furnished, and a library of 160 volumes. Number of members 22. The other is the "Amicitiæ Societas," constituted April 28, 1849, with 8 members. It has a large hall well fitted up, and about 150 volumes. Richard Beard, president of Cumberland College.

SHELBYVILLE.

Shelby College Libraries—4,000 vols.—"An extensive theological and classical library is attached to the college, which will be accessible to such students as may choose to enjoy its advantages. The number of volumes amounts to about 4,000. A reading-room is connected with the library, which is furnished with the leading American and English reviews and other periodical publications." "Two literary societies exist among the students: one—chartered in 1848, under the name of Phi-Mu—has some 25 members, a small but well-selected library, and receives regularly the pricipal reviews, English and American, as soon as published. The other, auxiliary to this, is for the benefit of the younger portion of the students. Both are making strenuous exertions to increase their libraries and other means of intellectual improvement. Any aid the public may see fit to afford will be thankfully acknowledged. Convenient rooms will be provided, and handsomely fitted up, during the coming session of 1849–'50, in the new building." [College catalogue, 1849.]

OHIO.

ATHENS.

The University of Ohio—2,750 vols.—The college library was founded in 1804, and contains 1,250 volumes. A catalogue was printed in 1828, containing 12 pages. The library is opened once a week for an hour. All connected with the university may use it without charge. The institution has lately been reorganized, after a suspension of three years on account of debt. Professor William J. Hoge, librarian.

Students' libraries, 1,500 volumes.

BLENDON, FRANKLIN COUNTY.

Central College Library—550 vols.—The library was commenced in 1843, and contains 550 volumes. It is open one afternoon in two weeks. The faculty and trustees are entitled to use the books without charge The students pay a small fee. J. S. Henderson, librarian.

CINCINNATI.

The Young Men's Mercantile Library Association—10,000 *vols.*—The association was formed in 1835, and incorporated January 5, 1836. It possesses a library of 9,767 volumes, a few maps, globes, portraits, engravings, &c., &c. In July, 1846, at which time the library was removed to its present location, it numbered 4,000 volumes. The rate of increase, for several years, had been about 700 volumes per year. For the last two years 2,000 volumes a year have been added. The annual appropriation for books, for the last two years, has been 2,500 dollars a year. Previous to that, it had been about $800 per annum. The funds for the increase of the library are derived from the annual subscriptions, which amount to say $5,000, from which current expenses are to be deducted and a reading room sustained. In 1846 a building was erected at the joint expense of the Cincinnati College and the Library Association. It cost $35,000, of which the Association owns $10,000. The style of the edifice is Grecian. Dimensions—front, 140 feet; depth, 100 feet; height, (four stories) 58 feet. The construction is of the most permanent character, of Dayton limestone, the roof covered with iron. The rooms of the Library Association form the entire front of the second story. Library 29 feet by 45; reading-room, 29 by 45; directors' room, 16 by 14, with a room for stowing away newspapers, &c.; and a room now occupied as the Merchants' Exchange, 59 feet by 45, intended hereafter for the library. The "Catalogue of the Young Men's Library Association in Cincinnati," printed at Cincinnati in 1846, contains 145 pages 8vo. The "Supplementary Catalogue," &c., was printed in 1848, and paged continuously with the catalogue, the two forming 260 pages 8vo. The catalogue is alphabetical, with a classified index; is very well prepared, and handsomely printed. An earlier catalogue was printed in 1844, 62 pages 8vo. The library is open daily (Sundays and holidays excepted) from 9 a. m. till 10 p. m. The library is for the use of the members of the association and others, at the discretion of the board of directors. Members pay $1 initiation fee, and the further sum of $3 as an annual subscription. About 15,000 books are lent out each year; and about 2,000 books are consulted, by about 100 different persons, in a year, without taking them away from the library. The present librarian is Thomas Gales Foster. Besides the library, this institution maintains an annual course of lectures. The printed annual reports of the board of directors show that the establishment is conducted with great energy and intelligence, and that it is eminently and increasingly useful.

Lane Seminary, at Walnut Hills, near Cincinnati.—This institution was incorporated in 1829, and commenced full operations in 1832. It is under the direction of the Presbyterians. The library, founded in 1837, contains 10,000 volumes, 4 ancient manuscripts, and 33 volumes of engravings. It is intended to appropriate $500 a year, from the funds of the seminary, for the increase of the library. There is a manuscript catalogue. The library is open twice a week, regularly. It is for the free use of the faculty and students. Other persons wishing to consult the library are always accommodated by the librarian. Professor C. E. Stowe, librarian.

St. Xavier College Libraries—5,600 *vols.*—The library was founded in November, 1841, and contains something over 5,000 volumes. It increases at the rate of about 400 volumes a year. The college having no endowment, nor any established fund, there is no permanent appropriation for the library, but only such as occasion justifies. The library is in a hall of the college building, 40 feet by 25. There is a manuscript catalogue. The library is open daily from 7 to 8 a. m., and from 4½ to 5 p. m.; on Thursdays from 9 to 12. The use of the books is confined to those belonging to the college; but by courtesy any literary, or other respectable person, may have access upon application. There are two societies of students possessing libraries: the Philopedian has 300 well-selected books; and the Philhermenian, nearly the same number. Rev. J. De Bleeck, president.

The Ohio Mechanics' Institute—3,265 *vols.* The library was founded and incorporated in 1829, and contains 3,200 volumes. The institute possesses also a philosophical apparatus, said to be the best in the State. For the last ten years the annual average increase has been about 200 volumes, and the expenditure for books about $100. The library is supplied principally by donations and occasional special subscriptions. The institute is erecting, by subscription, a building on the corner of Vine and 6th streets. It is of brick and iron. Estimated expense; $32,000. It will be finished in 1850. The outside dimensions are 90 feet on Vine street, 75 feet on 6th street. It has four stories, attic and basement. It is intended to lease about three-fourths of the building to others.

A catalogue, 48 pages 12mo., was printed in 1841. The library is open six days in the week from sunrise till 10 o'clock p. m.; Sundays, from sunrise to sunset. Members pay $3 per annum, ladies and minors 50 cents per annum, for the use of the books. The total number of volumes lent out from September 1, 1848, to September 1, 1849, was 5,069. Samuel Warner, acting librarian.

The Historical and Philosophical Society of Ohio.—Founded February 11, 1831. The library contains about 1,000 volumes, and about 2,500 pages of historical manuscripts, in English and French. All the books have been procured by donation. The library is opened daily for four hours, and accessible to all who wish to consult it. Perhaps one hundred and fifty different persons a year avail themselves of its privileges. G. Williams Kendall, librarian.

Apprentices' Library—2,200 *vols.*

The Medical College of Ohio.—The library, founded in 1826, contains 2,129 volumes, 50 volumes of engravings, and the manuscript theses on medical subjects by the graduates. It occupies two rooms in the college edifice. The books are arranged in 9 chapters, viz: 1, anatomy; 2, chemistry; 3, surgery; 4, materia medica; 5, obstetrics; 6, theory and practice of medicine; 7, periodicals; 8, miscellaneous works; 9, engravings. A catalogue was printed in 1832, but the library has been considerably enlarged since that time. The library is open Mondays, Wednesdays, and Fridays, from 1½ to 5 o'clock p. m. It is for the use of the trustees, professors and students of the college. Alexander Denniston, librarian.

Orphan Asylum.—Founded 1840: has 400 volumes. Miss Wood, librarian.

Woodward College Libraries—1,400 *vols.*

CLEVELAND.

The Western Reserve Medical College—1,000 *vols.*

Cleveland University.—A tract of 275 acres of land has been purchased for $34,000. It is expected that, after some 50 or 75 acres shall have been reserved for the college, the remainder will yield a handsome fund for the purposes of the college. It is proposed to erect one large edifice for public rooms. The students will lodge in private houses. Active measures are in operation to open the institution for students by 1st March, 1850. [Letter of A. Mahan, president, in New York Tribune, November 28, 1850.]

COLUMBUS.

State Library—12,500 *vols.*—The State Library of Ohio was founded in 1817, and contains (1850) 12,500 volumes. It increases at the rate of about 500 volumes a year. The State publishes its own reports, the profits of which, amounting to about $800 per annum, are appropriated to the purchase of books for the library. The library is under the control of commissioners, consisting of the governor, secretary of state, and State librarian. The room occupied by the library is 118 feet by 22. A catalogue is published every three years. The last, printed in 1848, contains 92 pages 8vo. The library is open daily, (Sundays excepted,) from 7 o'clock a. m. to 6 p. m. in summer, and from 7 a. m. till 9 p. m. in winter. The library is free to members of the legislature and officers of State, and it may be used by others by consent of the library commissioners. The number of volumes lent annually is about 1,800. About 3,000 persons annually consult the library. John Greiner, State librarian.

DELAWARE.

Ohio Wesleyan University—2,780 *vols.*—The college library was founded in 1845, and contains 2,000 volumes. It is open once a week for an hour. The students pay 50 cents a term for the use of the books. The faculty use them without fee. Professor McCabe, librarian. The Letagothian Society of Students, instituted 1845, has a library of 335 volumes, increasing about 100 vols. each year. It has also about 250 mineralogical specimens and curious coins. The Chrestomathian Society, instituted 1846, has 450 volumes; annual increase, 60 volumes.

GAMBIER.

Kenyon College Libraries—7,550 *vols.*—The library of this college is called the Library of the Theological Seminary of the Diocese of Ohio. It was founded in 1824, and contains about 4,550 volumes. The library is kept in the building of the Theological Seminary, and occupies a room 40 feet long, 18 feet wide, and 12 feet high. A catalogue was printed in 1837, containing 76 pages 8vo. The library is open one hour each week, and is free to the members of the college and seminary. Rev. M. T. C. Wing, librarian.

The students' libraries contain 3,000 volumes.

GRANVILLE.

College Libraries—3,000 vols.—The library, founded in 1836, contains 1,000 volumes. Open every Saturday for the use of the officers and students. Rev. Silas Bailey, president.

Students' libraries, 2,000 volumes.

HILLSBOROUGH.

The Library and Museum Association of Oakland Female Seminary.—The association is composed of the pupils of the seminary and ladies in Hillsborough. It was formed in 1840. The library contains about 400 volumes, besides a collection of shells and minerals. About 40 volumes a year are added to the library. A catalogue (8 pages) was printed in January, 1848. Another will be published soon. The library is open every school-day, whenever the pupils or others wish to exchange books. Pupils pay $1 for membership; other ladies, $2. About 3,000 volumes were taken out the last year, which is a greater number than ever before. Nancy F. Parker, librarian.

HUDSON.

Western Reserve College—7,634 vols.—The college library was founded in 1826, and contains 4,568 volumes, exclusive of periodicals and pamphlets, unbound, which amount to about 200 volumes. The average annual increase for the last ten years has been 133 volumes, mostly donations. About $50 a year have been appropriated for books. A brick building 62 feet by 42 was erected for chapel and library. The library-room is 40 feet square. A catalogue (18 pp. 12mo.) was printed in ——. The library is open each Saturday afternoon. The faculty use the books without charge. The students pay $1 50 per annum. About 1,000 books are lent out each year. There are two societies of students connected with the college possessing libraries, containing together 3,066 volumes. Professor Henry N. Day, librarian.

MARIETTA.

Marietta College Libraries—6,400 vols.—The college library was founded in 1835, when the present college charter was obtained. It now (1850) contains 4,300 volumes. Its average rate of increase has been of late about 120 volumes annually. The library is open for one and a half hours every Saturday. The use of the books is free of charge to the trustees and faculty: the students pay $1 per year. A subscription has lately been opened for $10,000, and is nearly filled up, for the benefit of the library. It is proposed to expend about half of this sum immediately in the purchase of books, and to fund the other half. A brick building, 65 feet by 53, and three stories high, has just been completed. On the first floor are the laboratory, room for philosophical apparatus, and recitation-room for the senior class. On the second floor, the library, the cabinet, the Hildreth cabinet, and a rhetorical-room, used at present as a chapel. In the third story are two large rooms for the societies, with recesses for the libraries. The whole cost of the building was between $7,000 and

$8,000. The library-room is, say 53 by 25 feet, and 14 feet high A catalogue of the library (42 pp. 8vo.) was printed in 1840.

"The college library embraces, in addition to works of general literature, a valuable collection of philological works, procured in Europe.

"It also contains a large collection of text-books, which furnishes, at a trifling percentage, nearly all the text-books used in the preparatory and college courses; and a considerable portion of these are the best German editions of entire works.

"In addition to these, there are three libraries belonging to the college societies, carefully selected, and placing within the reach of students a considerable amount of useful reading.

"The present number of volumes in the several libraries is as follows:

College Library, general literature	2,650
" " philology	1,000
" " text-books	650
Psi Gamma Society Library	850
Alpha Kappa " "	750
Society of Inquiry "	500
Total	6,400"

Dr. S. P. Hildreth has lately presented his valuable cabinet to the college. This cabinet contains "more than 4,000 specimens in the various departments of natural history, arranged in cases and drawers, labelled, numbered, and entered in a catalogue under their respective heads."

The Marietta Library Association—1,000 *vols.*—This association has been in existence many years. A brick building, two stories high, was erected by it some twenty years ago for a library and lecture room. A thousand dollars have lately been raised for the purchase of books. The librarian is Thomas Vinton.

There is also at Marietta a library collected from the proceeds of a part of the township reservation for religious purposes. It is now under the care of the Universalist Church.

NEW ATHENS.

Franklin College Libraries—2,000 *vols.*

OBERLIN.

Institute Libraries—4,000 *vols.*—This institution was chartered with university privileges in 1833-'4. It embraces a theological, college, teachers', ladies', and preparatory departments. There are about 4,000 volumes in the libraries, as stated in the American Almanac for 1850.

OXFORD.

Miami University Libraries—6,786 *vols.*—Miami University was founded in 1809. A grammar school was established in 1818. The university began its operations in 1824. The library of the university was founded in 1812, and contains 3,486 volumes. It increases at the rate of about 200 volumes a year. Some appropriation is generally made for each year to purchase books: for five years previous to August, 1847, it was about

$250 a year. Now, it is $150. The university library and the two society libraries occupy three separate rooms, each 32 feet in length, 18 feet in breadth, and 18 feet high. The university library is open every Saturday morning for half an hour, and generally for two or three hours every afternoon. Persons entitled to the use of the books are—the faculty, free; students, who pay fifty cents a session; also the inhabitants of Oxford, on the same terms as the students. The number of volumes lent out of the library during the year ending October 1, 1848, is 489. This is perhaps about the average.

There are, in connexion with the institution, two students' libraries: the Erodelphian, containing 1,500 volumes, and the Miami Union, containing 1,800 volumes. James C. Moffat, librarian.

SPRINGFIELD.

Wittenburg College Libraries—5,265 *vols.*—The library was founded May 4, 1846, and contains 1,406 volumes. About 100 dollars per year are expended for books. The library is opened once a week, and kept open one hour each time. H. K. Geiger, librarian.

The Excelsior and Philosophian Societies, composed of students of the college, possess valuable libraries. The Excelsior library contains 2,054 volumes and increases about 600 volumes per annum. About 150 dollars are each year expended for books. The Philosophian library contains 1,805 volumes and increases about 522 volumes per annum. About 135 dollars are annually expended for books.

Lyceum Library.—The Springfield Lyceum was formed November 19, 1832, but till 1849 it had but few members. Its library numbered but about 300 volumes. Lately a new impulse has been given to the institution: a reading-room has been opened and supplied with 33 of the best reviews and newspapers, and public lectures have been commenced The number of members has increased to 150, paying annually three dollars each. The room is open daily. Edward M. Doty, librarian.

STEUBENVILLE.

City Library.—The Steubenville City Library was founded in 1847, and contains 550 volumes. A catalogue is in press. The library is open every Saturday evening from 6 to 8 o'clock. Members pay 10 cents a month for the use of the books—others 20 cents. David F. Cobb, librarian.

ZANESVILLE.

Athenæum Library—3,580 *vols.*—The Zanesville Athenæum was incorporated in 1828. The library contains 3,580 volumes, and increases at the rate of about 100 volumes a year. Two catalogues have been printed: one, 20 pp. 12mo., 1831; the other, 72 pp. 8vo., 1843. The library is open daily. The librarian is in attendance Wednesday and Saturday evenings. Stockholders pay five dollars per annum: subscribers three dollars.

INDIANA.

BLOOMINGTON.

Indiana State University Libraries—5,000 vols.—This institution was founded in 1816. In the catalogue for 1848 are the following notices of the libraries connected with the university: "The college library is open to all of the students on paying a subscription of 50 cents per session. Each subscriber is permitted to take out a volume every Saturday.

"This library has recently been augmented by a purchase of about 2,000 dollars worth of books, some of them rare and valuable. It embraces a choice collection of Greek, Latin, French, and English classics, the best standard works on history, biography, and the sciences, together with a selected variety of miscellaneous literature."

"There are two literary societies connected with the university—the Philomathean and Athenian Societies. Each has a well selected library of several hundred volumes."

In the Law School, a good law library is provided for the use of the students.

The aggregate number of volumes in the libraries may be stated at 5,000. A catalogue was printed in 1840, containing 50 pages 8vo., prepared on the plan proposed by Professor Park in his "Pantology."

Monroe County Library—4,000 vols.

CRAWFORDSVILLE.

Wabash College Libraries—6,100 vols.—Wabash College was established in 1833. The library was commenced in 1835, and burnt in 1838. It was a choice collection of about 2,000 volumes, exclusive of the text-book library. A new collection was begun in 1839. It contains 4,300 volumes. There is a small fund slowly accumulating for the purchase of books. It is proposed soon to erect a new building for the library and other purposes. The library is open once a week, and is accessible to all persons connected with the institution. Students pay 25 cents a term for the use of the books. There are two societies of students—the Lyceum and the Calliopean. Each has 900 volumes. Professor Caleb Mills, librarian.

EVANSVILLE.

Vanderburg County Library—2,000 vols.—The sum of $1,000 has been placed in the hands of the treasurer, and about an equal sum is due from the county, for the purpose of founding a county library. An agent will purchase the books in the spring. The library will be open to all inhabitants of the county on the payment of $— per year. John Ingle, jr., treasurer; J. A. Corbet, secretary.

FRANKLIN.

College Libraries—600 vols.

GREENCASTLE.

Indiana Asbury University Library—2,700 vols.

SOUTH HANOVER.

Hanover College Libraries—4,700 vols.—This institution was founded in 1829. In the triennial catalogue for 1849, it is stated: "By the liberality of friends in the East and elsewhere, a very valuable library, and an extensive and excellent cabinet of minerals, have been recently obtained." The number of volumes at present (January, 1850) is 1,700. There are two societies of students possessing libraries—the Union Literary Society, 1,500 volumes; Philalethian Society, 1,500 volumes.

INDIANAPOLIS.

The State Library—7,000 vols.—Founded by act of legislature, February 11, 1825, and contains about 7,000 volumes, exclusive of duplicates and surplus legislative acts and journals. It has also many valuable maps and charts; some curious Mexican armor and arms; a portrait of "Beato Simon de Cassia," painted in 1751; a painting of the "Tippecanoe battle-ground," 150 square feet; and a small collection of minerals and fossils. The average increase is about 250 volumes per annum, including congressional documents. The average expenditure is about $200 a year. The legislature makes, annually, a specific appropriation for the increase of the State library. It is usually $300—part of which goes to pay for newspapers, periodicals, and binding. The library occupies four rooms on the first floor of the State-house—together, 80 feet long, 21 feet wide. The last printed catalogue was published in 1841, and contains 36 pages 8vo. The library is open daily (Sundays excepted) from 9 a. m. to 6 p. m., during the sittings of the legislature, the supreme court of Indiana, and the district court of the United States—at other times, every Saturday from 8 a. m. to 4 p. m. Persons entitled to the use of the library are: members of the legislature, ministers of the gospel, editors of newspapers, physicians, engineers on the public works, judges of the United States and State courts, attorneys of the supreme court, officers of State benevolent institutions, secretaries and clerks of the legislature, and all persons elected to office by the legislature. To such persons, the books may be lent out for a period not exceeding 30 days—the books not to be taken from the seat of government. About 1,600 are taken out annually. John B. Dillon, librarian.

LAPORTE.

Indiana Medical College—the medical department of Laporte university. The catalogue for 1845–'6 states: "During the past winter, a medical and scientific library association, connected with the institution, was formed. Students can have access to the library by complying with necessary regulations."

LOGANSPORT.

The Sigourney Library—3,000 vols.

NORTH BEND.

St. Mary's Library—2,000 *vols.*—The University of Notre Dame du Lac, at North Bend, established 1842, possesses a library of the above name, containing 2,000 volumes. It is kept in a fine room, 21 feet by 14, in the college, and is open daily from 1 to 5 o'clock for the use of the professors, students, and neighbors. About 1,000 books are lent out annually. E. A. Dussaulx, librarian.

VINCENNES.

Public Library—1,700 *vols.*—The Vincennes library was established July 20, 1806, and contains (1850) 1,700 volumes. It is kept in a room, 15 feet square, in the City Hall. The first catalogue was printed in 1813; the next and last in 1838, of 17 pages 8vo. The library is opened once a week for three hours. Any individual may have the use of the books by paying $2 annually. Willis M. Hitt, librarian.

COUNTY LIBRARIES.

The State of Indiana provided, in the law laying out the State into counties, for the appropriation of a piece of land in each county to the establishment of a public library. The income of the money arising from the sale of certain reserved lots was to be appropriated to the purchase of books. Monroe county has already procured a valuable library of 4,000 volumes: it is located at Bloomington. Vandenburgh county, as already stated, is about to establish one. Other counties, it is believed, have already commenced their collections, but we have not as yet been able to procure exact statistics concerning them. In some cases, the attempt to establish these libraries has failed, and the books collected have been sold at auction. The difficulty arose from the want of a librarian. No salary having been provided for such an officer, the books were neglected, and the library finally abandoned.

Historical Society of the County of Vigo.—From the anniversary lecture delivered before this society in March, 1844, by Rev. Robert B. Croes, we learn that one principal object of the society is to collect a library.

ILLINOIS.

CHICAGO.

Mechanics' Library—1,000 *vols.*—The Chicago Mechanics' Institute was founded in 1842, and possesses 1,000 volumes, 40 maps and charts, and 500 minerals. It expends for books about $150 a year. The institute has a bequest of real estate, situated in the city, valued at $5,000, as a permanent fund, but at present unavailable. The library is at present kept in a brick building adjoining the Mechanics' Hall. Two catalogues have been published—one printed in 1843; the second, (30 pages 12mo.,) in 1847. The library is open for consultation every evening, and for the delivery of books once a week. The library is free to all persons for special reference. Members of the institute, their families and apprentices, may use it without charge. Other citizens pay $3 per annum; apprentices, $1. About 2,000 volumes a year are lent out. A. D. Taylor, librarian.

GALESBURG.

Knox Manual Labor College Library—1,400 *vols.*—The library was founded in 1844, and contains 1,400 volumes, besides 400 text books and 500 volumes belonging to the preparatory department. About $40 a year are expended for books. The library is open once every two weeks for an hour. College students pay $1 a year for the use of the library. About 300 volumes a year are lent to the faculty and students. The Adelphi Society of Students has a small library, purchased a few months ago for $100. The "Gnothautic Society" has $75 subscribed for the purchase of books. J. S. Kuhn, librarian.

GODFREY.

Monticello Female Seminary, 4 miles from Alton, Illinois, founded 1838.—"The library consists of more than 1,000 vols. It is accessible to all pupils." [See 11th annual catalogue.]

JACKSONVILLE.

Illinois College Library—4,000 *vols.*—The library was founded in 1830, and contains 4,000 volumes. It is open twice a week, one hour each time. William Coffin, librarian.

LEBANON.

McKendree College Libraries—1,825 *vols.*—The college library was founded in 1820, and contains 1,200 volumes. The average increase is about 100 volumes a year, mostly donations. A catalogue will soon be printed The library is free to all persons connected with the college. About 400 volumes are taken out annually. The library is open once a week for one hour. The Philosophian Society of Students, founded in 1846, has a library of 465 volumes. The Platonian Society, formed 1849, has 160 volumes. Professor A. W. Cummings, librarian, McKendree College.

SPRINGFIELD.

State Library of Illinois—4,000 *vols.*—This library contains 4,000 volumes or more, exclusive of duplicates. From the last annual report of the librarian, presented to the legislature 9th January, 1849, it appears that the sum of $191 29 was expended the preceding year for miscellaneous books. This sum was the proceeds of the sale of the State laws, which are by law appropriated to the library. The secretary of state is *ex officio* librarian; but, in the report referred to, he suggests "whether this department, consisting of this peculiar description of property, belonging to the State, of thousands of dollars in value, does not merit the personal sole attention of a competent person, selected for the exclusive purpose," &c. "A catalogue of the books belonging to the Illinois State Library, prepared by H. S. Cooley, secretary of state and *ex officio* librarian, January, 1848," was printed at Springfield in 1848, containing 47 pages 8vo. The catalogue is divided into seven parts: 1, jurisprudence; 2, miscellaneous works; 3, laws and judicial reports of the State; 4, legislative journals and reports of the State; 5, laws of the several States; 6, laws, documents, &c., of the United States; 7, pamphlets, maps, &c

The library is required to be open every day, (Sundays excepted,) during the session of the legislature, from 8 a. m. till 6 p. m. Books may be taken out by members and officers of the General Assembly during its session, and at any time by the governor, officers of the executive departments, justices of the supreme court, and attorney general. The librarian says, at the close of his last report: "The undersigned would respectfully call the attention of the legislature to the fact that our library probably embraces a less number and a less valuable and useful collection of miscellaneous books than is found in any of the libraries of our sister States, which suggests the importance of providing, by law, for a small sum to be appropriated yearly, from the public treasury, for the purchase of scientific and other works for this department of the library."

ST. CLAIR COUNTY.

The German Library of St. Clair county—1,821 *vols.*—We are indebted to Mr. Anthony Schott for the following interesting account of the library founded and sustained by the intelligent and educated German settlers in St. Clair county:

"About the year 1830 the wave of immigration from Germany reached the Mississippi river, and but shortly afterwards it was swelled to an unprecedented height by political causes on the old continent. The consequences and reactions of the French revolution of that year, in and on Germany, caused a great number of persons to despond of any meliorations in the State affairs of Germany, and to seek for an asylum from the renewed and increased oppressions in their fatherland. Those who wended their way to America were in great numbers from the professional classes, and mostly men in the prime of their lives, who, with youthful ardor, had entered into the political arena, and many of whom had been more or less implicated in the efforts fruitlessly made to obtain the liberty of the press and more liberal constitutions. Upon them the following book exerted an immense influence: 'Duden's Account of a Residence in the Western States of North America;' (first edition: Elberfield, 1829.) It was written in an earnest and philosophical manner, in a style, as it were, expressly adapted to the well educated classes. To that book, it may safely be ascribed, that between 1830 and 1840 so large a number of German emigrants settled in the counties of St. Louis, St. Charles, Washington, Franklin, in Missouri; and of St. Clair, in Illinois. Thus, in 1836 we found some 5,000 to 6,000 volumes of books in the possession of new settlers in St. Clair county, Ill., who lived not very far apart and mostly in social intercourse. It was, therefore, practicable to provide for a common centre, in which these books, if not immediately, yet in the future, might be collected, instead of being scattered and lost. The impulse was given by Sparks's Writings of Washington, offered by a trading agent and desired by many, but too expensive for any one alone. This book was fitly made the corner-stone of a common library, to be built up by a very small annual contribution, ($2) by donations, (and of course they were very often books discarded from the shelves of the donors for their worthlessness to them; though I have had the satisfaction of seeing many of them used to good purpose, which I never had expected to take down again,) and eventually by legacies. Our small means have been since 1840 still more limited, by a deduction of 20 per cent. of the yearly income for a reserved fund, designed to purchase at the county seat a building for the library, when our books shall have become too numerous to be contained in a room of the librarian's farm-house, (not in a log-house built for that purpose, as Dr. Ludewig says in his article on the libraries of the United States, in Naumann's Serapeum, No. 9, Leipzig, 1846, where he also errs in giving another library to the Germans at Belleville,) and to buy, by free lodgings therein, the services of a young professional man as a librarian, when they would no more be rendered gratuitously.

"Under these circumstances, we feel some satisfaction that the German Library Society of St. Clair county, Illinois, incorporated by act of our legislature in 1839, now contains 885 works, in 1,821 volumes; that there are among them some collections of comparative value, (the works of the great men of our Revolution;) Congressional documents, due to the favor of our senators and representatives; continued files of several German and American newspapers and periodicals; publications in reference to the liberal movements in Germany since 1830; on emigration; on ancient German literature; on agriculture; on mathematics, &c.; and that we have reason to hope that our library, whenever it will be proper to transfer it to Belleville, will be firmly enough established to pass through the increase of expenses coincident with the expected increase of means and usefulness, which has frequently prostrated similar institutions—e. g., the St. Louis Library, in 1839.

"In the catalogue, as far as it has been printed, the books are numbered according to the time they came into the possession of the society; but we have an alphabetical catalogue, containing the full titles on detached leaves; and thirdly, (not a so-called scientific catalogue, for which our library is too small, but) a *catalogus materiarum*, where, under proper heads, all our books treating on the same subject are named."

UPPER ALTON.

Shurtleff College Library—1,520 *vols.*—The library contains 1,520 books, and 700 pamphlets and magazines. About 60 or 70 books are added each year. The library is open one hour each week. Trustees, the faculty and students of the institution, and such literary gentlemen in the vicinity as the committee may designate, are entitled to the use of the library. The Alpha Zeta Society of Students, recently established, possesses a small library. Washington Leverett, librarian.

MISSOURI.

CAPE GIRARDEAU.

St. Mary's College Library—2,400 *vols.*

COLUMBIA.

Missouri University Libraries—1,200 *vols.*—The college library was founded in 1842, and contains 675 volumes. One appropriation, which was of $1,200, has been made for books. It is not wholly expended. The endowment of the university is $100,000, invested in bank stock. The library-room in the university building is 36 feet by 24. It is open one hour every two weeks. The use of the books is without charge to officers and students. The Athenian Society of Students has 200 volumes; the Union Literary Society, 325 volumes. R. S. Holmes, college librarian.

FAYETTE.

Howard High School Library—500 *vols.*—This flourishing institution occupies the buildings designed for Fayette College, which, though chartered, never went into operation. It has a library of 500 volumes, commenced in 1849. There is a fund yielding $100 annual income to be continued for the increase of the library till it reaches 2,000 volumes. It will probably be continued longer. W. T. Lucky, principal.

JEFFERSON CITY.

State Library of Missouri—4,637 *vols.*—The library was established by law in 1829. In 1831 the sum of $150 a year was appropriated for the purchase of books. In 1833 the annual appropriation was raised to $450. On the 15th November, 1837, the library was destroyed by fire, and everything valuable lost. The library at present contains 4,637 volumes, and 32 maps and charts. It derives a small income from the sale of the State reports, laws, &c. The library-room is in the State House. It is one half of a circle, 56 feet in diameter, 16 feet high. During the session of the General Assembly it is kept open from 9 a. m. to 5 p. m. daily. During the recess it is opened occasionally, as the librarian may direct. State officers and members of the legislature may take out books, by giving receipts to the librarian. All other persons who desire it may consult the books in the room. The clerk of the supreme court is made, by law, *ex officio* librarian. Present officer, William E. Dunscomb.

The Historical and Philosophical Society of Missouri, 300 *vols.*—From the first number of the "Annals" of the society, (29 pp. 8vo., 1848,) we take the following account of the society and its collections:

"In the year 1844 a few individuals made an effort to establish a Historical and Philosophical Society for the State of Missouri, similar to institutions successfully established in other States. On the 18th of December, in that year, a meeting was held in the Senate chamber, in the city of Jefferson, at which measures were taken to organize the society, addresses were delivered explaining its object and utility, a constitution adopted for its government, fourteen gentlemen enrolled their names as members, and a committee was appointed to apply to the General Assembly for an act of incorporation. The Rev. Dr. Goodrich presented to the society a volume of ancient travels in America, and a fac-simile engraving of hieroglyphics, found in an Indian mound in Illinois, and these constituted the beginning of a library and cabinet which will probably become extensive and valuable. The constitution declared the objects of the society to be to collect and preserve all papers, memorials and documents connected with the early history of Missouri, and all statistics in any way pertaining to the population, mineral, navigable and agricultural resources of the State, and to make publication thereof from time to time. In conformity to the request of the society, an act of incorporation was passed and approved by the governor on the 27th day of February, 1845. Since that time an act has been passed granting to the society the use of a room in the capitol, well adapted to its purposes. The society is located at the city of Jefferson, but branches or auxiliary societies may be established in any other part of the State.

"The first annual meeting of the society was held on the 20th of January, 1845, at which officers were chosen for the ensuing year, new members admitted, several distinguished citizens of other States were elected as honorary members; the presentation of some books, mineral specimens, and other articles, was announced, and resolutions were passed requesting the co-operation of the citizens of the State.

"The second annual meeting of the society was held on the 19th of January, 1846, at which addresses were delivered, the presentation of additions to the library, cabinet, and museum, announced, resolutions passed, and officers chosen for the succeeding year.

"The third annual meeting occurred on the 19th of January, 1847, at which reports of officers were heard, resolutions adopted, officers for the year selected, and addresses delivered.

"On the 17th of January, 1848, the fourth annual meeting of the society was held, at which the reports of the officers were made and approved, some appropriate speeches were delivered, and officers for the present year selected.

"A room has been fitted up for the reception of books, pamphlets, papers, manuscripts, curiosities, and other articles, and the foundation for a library, cabinet and museum has been laid; and hopes are entertained that the liberality and public spirit of the citizens of Missouri will cause the same to be rapidly increased by many valuable additions.

"All editors and publishers of weekly newspapers and periodicals are solicited to present to the society regular files thereof, in order that they may be bound in volumes and carefully preserved. The authors of all books, pamphlets, and publications of every kind, are requested to donate a copy of the same for the use of the library. The society invites the contribution of all old letters and manuscripts, illustrating the history of the discovery and early settlement of Missouri and of the western country. Files of all newspapers and periodicals that have been heretofore published in the State, will be very acceptable. Ancient and curious books and pamphlets are desired as additions to the library, particularly all such as relate to the western country. A copy of every book and pamphlet that was ever published in the State is desired; no publication should be considered too unimportant to enter into such a collection. One object of the society is to collect and preserve the fleeting and ephemeral publications that otherwise would be buried in oblivion. Citizens throughout the State may make many contributions to the society without much trouble or inconvenience."

PALMYRA.

Masonic College Library—2,500 *vols.*
Saint Charles College Library—390 *vols.*

ST. LOUIS.

University Libraries—13,580 *vols.*—The college library, founded in 1829, contains 12,500 volumes, increasing at the rate of 200 volumes a year. It occupies a room 40 feet by 20 in the college building; opened once a day. All persons connected with the university are entitled to the use of the books. Others are permitted to consult the library at any time. There are three libraries belonging to societies of students: The Philalethian, with 630 volumes; the Orthological, 200 volumes; and the Phileuphradic, 250 volumes. Caspar Girsch, librarian.

Mercantile Library Association—4,299 *vols.*—This association was founded in 1846. From the fourth report of the directors (January, 1850) we gather the following facts: The present number of members is 589. During the year 1849 $1,888 40 were expended for 1;060 volumes; and 470 volumes were presented. From the origin of the library $4,901 40 have been expended for books. Those presented during the same time were valued at $1,766. Whole number of volumes in the library, 4,299. An alphabetical catalogue, with a classified index, forming about 300 pages 8vo., is now in press. Use of the books during the year, 4,743 volumes. 38 periodicals are taken. Of 20 of these the sets are complete. The librarian is William P. Curtis. Great pains seem to have been taken in the selection of books; and all the affairs of the institution appear to be conducted with much energy and good judgment.

Law Library—1,500 *vols.*—The Law Library was established in 1840, by members of the bar, and is kept in a room of the court-house.

MICHIGAN.

ALBION.

Wesleyan College Library—700 *vols.*—The Wesleyan College, founded in 1848, is making arrangements for the gathering of a library. The preparatory department, which has been longer in operation, has a library of about 700 volumes. C. T. Hinman, president.

ANN ARBOR.

Michigan University—5,000 *vols.*—Founded in 1837. "The library of this institution was purchased a few years since in Europe, and consists of between 4,000 and 5,000 volumes of well selected standard works, in the various departments of literature and science. There are two literary societies connected with the college, which hold weekly meetings during term time, and possess valuable libraries of select and miscellaneous books." [Catalogue, 1848–'9.] Professor Abram Seager, librarian.

DETROIT.

St. Philips College Library—3,000 *vols.*

Young Men's Society Library—1,815 *vols.*—The Detroit Young Men's Society was formed in 1833. Its library at present contains 1,815 volumes. The annual increase has been about 100 volumes; but of late a new and vigorous impulse has been given to the society. The number of paying members is 103, including many of the first citizens of the place. A new brick building has been erected by the society, and will be ready for occupation in October, 1850. The building is 95 feet by 24. The lower story will be rented for stores. The second story contains, besides two offices, a large hall for lectures, 70 feet by 40. The third story is divided into two rooms: one for a library, and the other for a committee-room, &c. This edifice, when completed, will have cost about $8,000. The lot on which it is built (valued at $5,000) was given to the society by the land board of the then district. It is eligibly situated on Jefferson avenue—the principal commercial street of the city. It is expected that the rent of those parts of the building not occupied by the society will, in the course of a few years, pay for the building, and yield a considerable revenue for the support and enlargement of the institution. The library, when removed, will be placed in permanent glass cases, and arranged according to subjects. The rooms will be open at all times of the day, for members of the society, and their friends not citizens. Members are elected by the board of managers. They pay $2 each as initiation fee, and an annual assessment of $2. The society is not solely a library association, but it embraces also another department—that of lectures and debates. A catalogue of the library (43 pages 8vo.) was printed in 1842. John S. Van Alstyne, librarian.

LANSING.

State Library—4,400 vols —The library was founded A. D. 1836, and contains 4,400 volumes. From 1839 to 1848 there were no additions by purchase. In 1848, 395 volumes were purchased for $620, and 226 volumes were presented. In 1849, about 400 volumes were added to the collection. The library is kept in a room of the capitol. A catalogue was printed April 1, 1846. The library is open every day from 9 a. m. to 12 m., and from 2 to 4 p. m. State officers and members of the legislature are entitled to take out the books. The secretary of state is *ex officio* State librarian. A clerk in his office has charge of the library, under his direction.

MONROE.

Public Library—1,500 vols.

SPRING ARBOR.

Central College Library—1,600 vols.

300 TOWNSHIP LIBRARIES,—43,926 VOLS.

"The law has for several years made it the duty of the supervisor to assess a half mill tax upon each dollar of the taxable property of his township for the purchase of a township library, a portion of which tax may, when certain conditions are complied with, be applied to the support of schools.

"The constitution of the State provides that 'the clear proceeds of all fines assessed in the several counties for any breach of the penal laws, shall be exclusively applied to the support of said libraries.'

"Although, according to the returns, there are but 300 township libraries in the 425 townships of the State from which reports have been received, still, there is a very gratifying increase in the number of these libraries, the number of volumes they contain, and the extent of their circulation. There are thirty more township libraries reported this year than last, containing in all 43,926 volumes, which is 6,938 more than they contained, according to the reports received, for the year 1846. These libraries circulate through 1,349 districts, which shows an increase of 268 over any former year. Communications received from several counties afford very gratifying evidence of their increased usefulness." [Mr. Mayhew's report, 1847.]

The amount of mill tax for township libraries in 1847 was $7,368 75. The amount of fines, &c., collected, $807 15.

74 SCHOOL DISTRICT LIBRARIES—3,294 VOLS.

The statutes formerly provided for these libraries. Now, however, the money formerly applied to them is devoted to township libraries. There are, however, still left seventy-four of these district libraries, with an aggregate of 3,294 volumes.

IOWA.

BURLINGTON.

"The '*Iowa Historical and Geological Institute*' was organized December 18, 1843, but ten years after the departure of the 'red men,' by four citizens of this city, and now [December, 1849] numbers over thirty members. The object of the association cannot be better communicated than by transcribing a portion of the preamble of the constitution: 'We, the undersigned, agree to organize an institution, to be located permanently at Burlington, Iowa, the object of which shall be the establishment of a cabinet of curiosities, of a library, and of a depository of records and papers relating to the primitive settlement, early history, and geological features of Iowa.'

"The objects of the association have been steadily kept in view, and constant additions are being made to the geological and historical departments, as well as to the library. The geological and mineralogical specimens amount to about two thousand, and some of them are exceedingly rare and valuable. The collection of historical papers, records, and facts relative to the early settlement and history of this State has demanded the special attention of some of the members; and thus has many an important historical fact, that otherwise, by the death or removal of the actors, would have been lost, been collected and preserved among the archives of the institute." [Letter from David Rorer, corresponding secretary.]

DAVENPORT.

The college at Davenport, Iowa, is in active operation. It has commenced the formation of a library.

IOWA CITY.

State Library of Iowa—1,600 *vols.*—The State Library was founded in 1839, and contains about 1,600 volumes. The yearly additions have been very small, derived from an exchange of law books and public documents between the States, and donations by Congress, probably not exceeding ten volumes a year. The library-room is in the capitol, and measures 42 feet by 21, and 14 feet high. A catalogue was printed in 1839, and another in 1845, containing 18 pp. 8vo. The library is open every day during the sessions of the legislature and the supreme court, from 9 o'clock a. m. to 9 p. m.; at other times it is open on Wednesday and Saturday afternoons. State officers, members of the legislature, and members of the supreme court bar, are entitled to the use of the books. Lemuel B. Patterson, State librarian.

This infant State has already made legislative provision for a State university, with several branches; a system of district schools, with normal schools, and district libraries. A superintendent has been elected—Mr. Thomas H. Benton, jr. He has lately published, in a handsome pamphlet of 140 pages, "Statutes of the State of Iowa relating to Common Schools, including forms, regulations, and instructions, respecting proceedings under those Statutes," 8vo: Iowa City, 1849. This contains plans of school houses, selections of books for district libraries, &c.

There is a Presbyterian College at West Point, Lee county.

WISCONSIN.

BELOIT.

Beloit College Libraries—1,000 *vols.*—The catalogue of Beloit College and Seminary for 1849–'50 states that "the libraries connected with the college now amount to over 1,000 volumes, and arrangements are made which will insure their progressive increase."

MADISON.

State Library—4,000 *vols.*—Founded in 1836; contains about 4,000 volumes, including pamphlets and magazines. The sum of $5,000 was appropriated by Congress in 1836 for the purchase of books. Since then no additions of importance have been made, except the laws and reports received from the different States. The library is placed in a room of the capitol, measuring 18 feet by 42. There has been no printed catalogue, but one will be published by January 1, 1850. Books are lent out to the members of the legislature, judges of the supreme court, and the State officers, to be returned in six days. About 5,000 persons consult the library yearly. It is opened during the sessions of the legislature and supreme court, from 9 a. m. to 8 p. m. Privileged persons can always have access to the books. George P. Delaplaine, State librarian.

University of the State of Wisconsin, at College Hill, near Madison.—This institution was incorporated in 1849.

A State Historical Society has been formed, and has commenced the gathering of a library. The first annual meeting of the Society was held at Madison, January 15, 1850.

MILWAUKIE.

The Young Men's Association of the City of Milwaukie has a library of more than 1,000 well-selected volumes. In the reading-room are to be found many of the valuable periodicals of the day. The library is open for the delivery of books every Wednesday from 2 to 5 o'clock, and Saturday evenings. The reading-room is open every evening. A catalogue of the library (18 pp. 12mo.) was printed in 1848.

MINNESOTA.

ST. PAUL.

Minnesota Historical Society.—This society was incorporated by the legislative assembly of the Territory on the 10th of October, 1849. It has already issued "Annals of the Minnesota Historical Society," 8vo., 28 pages: St. Paul. The officers of the society invite exchanges and contributions towards the formation of a library. Alexander Ramsey, president.

Territorial Library—3,000 vols.—The act of Congress establishing the Territory of Minnesota, approved March 3, 1849, contains an appropriation of $5,000 for a library, to be kept at the seat of government, for the use of the officers of the Territory, and other persons, under suitable regulations. The library (December, 1850) has been organized: 3,000 volumes of good books (law and miscellaneous) have been purchased, and a catalogue (30 pages 8vo.) published. Charles Cavileer, librarian.

ST. ANTHONY FALL.

The St. Anthony Library Association was incorporated November 1, 1849. During the winter of 1849, a series of lectures was delivered before the association. Just after the incorporation of the society, a purchase of books was made, as a nucleus of the proposed library. There are now, perhaps, 200 volumes upon the shelves.

CALIFORNIA.

MONTEREY.

"A good beginning for a public library has been made by the formation of the Monterey Library Association, and a subscription of $1,400. The plan meets with decided public favor, and an order has been forwarded to New York for books."—*New York Observer, May* 18, 1850.

TERRITORIES OF OREGON, NEW MEXICO, UTAH.

The acts of Congress establishing these Territories contain appropriations of $5,000 to each for the purchase of Territorial libraries. The library of Oregon has already (January, 1851) been purchased. Dr. Bernhisel, an energetic and intelligent agent, has been appointed to collect the library for Utah, and has made good progress in the work.

MILITARY LIBRARIES.

We are indebted to a distinguished officer for the following account of the military libraries connected with the United States army:

"Under authority of the 'General Regulations for the Army,' libraries, consisting of newspapers, pamphlets, and bound books, are formed at most, if not all, the military posts occupied by our army. The fund for the purchase of these is accumulated by savings in the bake-houses on soldiers' bread, and taxes on the sutlers of the posts.

"The number of volumes is generally but a few hundred, and not more than a thousand, probably, at any one of the largest posts; and the number is constantly varying, by the wear and tear of the books in the hands of soldiers, and by the interruptions occasioned very frequently of late by the removal of the troops or division of the companies comprising the garrison, as, in all such cases, the detached troops are entitled to take with them their proportionate shares of the library.

"The formation of these libraries, and the instituting of schools for instruction of soldiers and children at the military posts, have had a very beneficial effect, in the education of those who, without these advantages, would never be able to read, and inducing an application of time to books which otherwise would be spent in idleness and indulgence in evil habits."

TABULAR VIEW
OF
PUBLIC LIBRARIES
IN THE
UNITED STATES

Tabular view of public libraries in the United States.

States.	State libraries.		Social libraries.		College libraries.		Students' libraries.		Libraries of academies and professional schools.		Libraries of scientific and historical societies.		Public school libraries.		Total for States.	
	No.	Volumes.	No.	Volumes.	No.	Volumes.	No.	Volumes.	No.	Volumes.	No.	Volumes.	No.	Volumes.	No.	Volumes.
Maine	1	9,000	2	6,370	2	16,800	6	13,134	2	10,800	1	300	17	452	31	56,856
New Hampshire	1	4,700	9	13,878	1	6,400	5	16,200	7	10,700	2	2,800	25	2,500	50	57,178
Vermont	1	3,500	....	....	3	13,032	6	8,667	....	....	....	....	......	91,539	10	25,199
Massachusetts	1	7,400	23	126,269	4	71,693	15	28,735	9	45,450	10	44,572	800	19,637	862	415,658
Rhode Island	....	....	5	25,104	1	24,000	2	7,600	....	....	2	3,000	35	....	45	79,341
Connecticut	1	3,000	3	14,234	3	29,138	7	38,666	3	6,300	1	7,000	......	1,338,848	18	98,338
New York	3	34,099	21	151,894	8	43,376	7	19,319	171	143,465	4	25,253	8,070	....	8,284	1,756,254
New Jersey	1	5,000	3	4,300	3	18,000	2	7,000	1	9,000	1	825	......	....	11	44,125
Pennsylvania	1	10,000	16	125,385	10	37,875	12	29,350	7	38,300	5	38,478	......	....	51	279,388
Delaware	1	4,000	1	4,000	1	2,500	2	6,200	....	....	....	....	......	....	5	16,700
Maryland	1	15,000	9	32,156	6	25,592	4	1,700	3	3,150	1	1,500	......	....	24	79,098
Dist. of Columbia	10	100,200	2	7,000	2	29,500	4	2,800	...	....	2	9,173	....	....	20	148,673
Virginia	1	14,000	4	3,313	9	45,790	8	10,466	5	12,951	1	1,200	....	....	28	87,720
North Carolina	1	3,000	....	....	3	9,401	2	8,846	2	3,000	....	....	......	....	8	24,247
South Carolina	...	....	2	28,500	2	19,000	4	1,900	5	10,264	....	....	......	....	13	59,664
Georgia	...	....	1	6,510	5	15,637	4	4,685	2	5,000	1	2,000	......	....	13	33,832
Florida	2	4,000	1	1,337	....	....	....	....	....	....	....	....	......	....	3	5,337
Alabama	...	....	1	1,454	4	13,000	2	2,623	....	....	....	....	......	....	7	17,077
Mississippi	1	5,000	...	....	3	5,189	2	2,411	....	....	....	....	......	....	6	12,600
Louisiana	1	7,000	1	10,000	4	13,000	....	....	....	....	....	....	......	....	6	30,000
Texas	1	1,001	....	....	1	300	...	....	....	....	....	....	......	....	2	1,301
Arkansas	....	....	1	1,000	....	....	....	....	....	....	...	....	......	....	1	1,000
Tennessee	1	8,000	....	....	9	20,844	8	9,912	1	3,500	...	....	......	....	19	42,256
Kentucky	1	9,000	1	3,560	10	37,150	10	7,190	3	4,000	1	1,500	......	....	26	62,349

Ohio..........	1	12,500	8	21,295	13	35,510	19	20,205	3	12,529	1	1,000	......	....	45	103,039
Michigan.......	1	4,400	2	3,315	4	10,300	....	....	....	....	....	....	374	47,220	381	65,235
Indiana.........	1	7,000	4	10,700	6	17,300	4	4,800	....	....	....	....	......	....	15	39,800
Illinois..........	1	4,000	2	2,821	4	8,120	2	625	2	2,000	...	....	......	....	11	17,566
Missouri.......	1	4,637	2	5,799	5	18,465	5	1,605	1	500	1	300	......	....	15	31,306
Iowa..........	1	2,500	....	....	....	....	....	....	....	....	....	....	......	....	1	2,500
Wisconsin.......	1	4,000	1	1,000	....	....	....	....	....	....	....	....	......	....	2	5,000
Minnesota......	1	3,000	1	200	....	....	....	....	....	....	....	....	......	....	2	3,200
Total....	39	286,237	126	611,013	126	586,912	142	254,639	227	320,909	34	138,901	9,321	1,500,196	10,015	3,701,828

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Erratum.—Page 35, line 28 from the top, for "Williams College" read *William and Mary College.*